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TO PROHIBIT THE SECRETARY OF THE ARMY FROM ISSUING CERTAIN PERMITS IN CONNECTION WITH A PROPOSED WATER PIPELINE PROJECT UNTIL AN ENVIRONMENTAL IMPACT STATEMENT FOR THAT PROJECT HAS BEEN COMPLETED

(98-38)

HEARING

BEFORE THE

SUBCOMMITTEE ON WATER RESOURCES

OF THE

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

HOUSE OF REPRESENTATIVES

NINETY-EIGHTH CONGRESS

SECOND SESSION

ON

H.R. 4317

TO PROHIBIT THE SECRETARY OF THE ARMY FROM ISSUING CERTAIN PERMITS IN CONNECTION WITH A PROPOSED WATER PIPELINE PROJECT UNTIL AN ENVIRONMENTAL IMPACT STATEMENT FOR THAT PROJECT HAS BEEN COMPLETED

FEBRUARY 8, 1984

Printed for the use of the Committee on Public Works and Transportation

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98TH CONGRESS
1ST SESSION

H. R. 4317

To prohibit the Secretary of the Army from issuing certain permits in connection with a proposed water pipeline project until an environmental impact statement for that project has been completed.

IN THE HOUSE OF REPRESENTATIVES

NOVEMBER 4, 1983

Mr. JONES of North Carolina (for himself, Mr. DANIEL, and Mr. VALENTINE) introduced the following bill; which was referred to the Committee on Public Works and Transportation

---

A BILL

To prohibit the Secretary of the Army from issuing certain permits in connection with a proposed water pipeline project until an environmental impact statement for that project has been completed.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Notwithstanding any other provision of law, the Secretary of the Army may not issue a permit under section 10 of the Rivers and Harbors Appropriation Act of 1899 (30 Stat. 1121; 33 U.S.C. 403), or under section 404 of the Federal Water Polution Control Act (33 U.S.C. § 1344) for the construction of a water supply pipeline and related structures for

removing water from Lake Gaston (a lake within the States of North Carolina and Virginia) and transporting water to the city of Virginia Beach, Virginia, or the surrounding area, before a full environmental impact statement as described in section 102(2)C of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)C) is completed for the pipeline project.

TO PROHIBIT THE SECRETARY OF THE ARMY FROM ISSUING CERTAIN PERMITS IN CONNECTION WITH A PROPOSED WATER PIPELINE PROJECT UNTIL AN ENVIRONMENTAL IMPACT STATEMENT FOR THAT PROJECT HAS BEEN COMPLETED

WEDNESDAY, FEBRUARY 8, 1984

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON WATER RESOURCES,
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:10 a.m., in room 2247, Rayburn House Office Building, Hon. Robert A. Roe (chairman of the subcommittee) presiding.

Mr. ROE. Good morning, ladies and gentlemen, the Subcommittee on Water Resources will now convene.

This morning the Subcommittee on Water Resources meets to receive testimony on H.R. 4317, a bill to prohibit the Secretary of the Army from issuing certain permits in connection with a proposed water pipeline project until an environmental impact statement for that project has been completed.

The city of Virginia Beach, Va., faces a water supply problem because of the poor quality of the groundwater resources in its area. The city proposes to construct a pipeline to Lake Gaston the Roanoke River in order to obtain water to meet its future needs. The pipeline would cross a number of streams and therefore requires a permit from the Corps of Engineers pursuant to section 404 of the Federal Water Pollution Control Act. This section requires a permit for the disposal of any dredged or fill material into a water of the United States.

The Corps of Engineers has granted the section 404 permit after conducting an environmental assessment and determining that construction of the pipeline and withdrawal of water would not constitute a significant impact on the environment. Accordingly, no environmental impact statement was prepared. The State of North Carolina has recently filed a lawsuit challenging the granting of the permit without an environmental impact statement being prepared.

The city of Virginia Beach has also requested that the Corps of Engineers reallocate some 10,000 acre-feet of storage space in Kerr Lake from hydroelectric power purposes to water supply purposes pursuant to the provisions of the Water Supply Act of 1958. The

storage available for hydropower in Kerr Lake is 1 million acre-feet. Kerr Lake is on the Roanoke River upstream from Lake Gaston which is a hydropower project of the Virginia Electric Power Co. [VEPCO]. As the water is drawn out of Lake Gaston by Virginia Beach, it would be replenished by releases from Kerr Lake.

Forgive me, it is Kerr Lake for those of you from Virginia and North Carolina.

This matter has generated considerable controversy, and we have therefore scheduled this hearing to permit interested parties to present their views. This information will assist us in determining what action may be appropriate.

Our first witness is the Honorable Robert K. Dawson, Deputy Assistant Secretary of the Army for Civil Works.

First, however, before I call and recognize the Assistant Secretary, I will defer to our distinguished Representative and ranking minority member from Minnesota, Mr. Stangeland.

Mr. STANGELAND. Mr. Chairman, I would ask that my statement be made a part of the record. You have very eloquently outline the problems and concerns that we are going to have to deal with today.

To say the least, it is a complicated situation, with feeling running high on all sides, and I hope that the information we receive today will clarify the issues and help the parties resolve their problems.

We have an impressive list of witnesses, and I am sure their views will go a long way toward helping the committee review this matter.

[Mr. Stangeland's prepared statement follows:]

STATEMENT OF CONGRESSMAN ARLAN STANGELAND

Thank you, Mr. Chairman. Today we will hear from witnesses with regard to H.R. 4317, a bill to prohibit granting a permit for a non-Federal water pipeline from Lake Gaston to Virginia Beach, Virginia, until a full environmental impact statement has been completed.

The proposed pipeline from Lake Gaston to Virginia Beach would provide water supply for the Virginia Beach area. This rapidly growing area is apparently nearing its capacity for potable water. Because the water transferred from Lake Gaston could impact water storage in North Carolina, residents of that area have been concerned with what they view may be the loss of a highly valued resource.

The Corps of Engineers is involved in this project because a permit under section 404 of the Clean Water Act and section 10 of the 1899 River and Harbor Act is needed for construction of such a pipeline. At the time H.R. 4317 was introduced, the corps was considering whether an environmental impact statement would be needed. In December 1983, the corps made a finding of no significant impact and, therefore, no EIS was prepared. In January, the corps granted the permit.

Since that time I understand that at least three lawsuits have been filed. The State of North Carolina is suing the Corps of Engineers on the basis that the permit was illegally granted. The city of Virginia Beach is suing the state of North Carolina to have the permit declared valid. A further suit by the city of Virginia Beach involves acquisition of water rights.

To say the least, this is a complicated situation with feelings running high on all sides. I hope that the information the committee receives today will both help clarify the issues and help all parties resolve their concerns.

We certainly have a impressive list of witnesses, and I am sure their views will go a long way toward helping the committee review this matter.

Mr. ROE. Why do we not go this way? The committee wants to welcome as our first witness this morning, Deputy Assistant Secre-

tary Dawson of the Army for Civil Works, accompanied by General Edgar.

We want to welcome you to the subcommittee.

The full text of your prepared statement will appear in the record at this point.

[Statement referred to follows:]

STATEMENT OF ROBERT K. DAWSON, DEPUTY ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

Mr. Chairman and Members of the Subcommittee: I am Robert K. Dawson, Deputy Assistant Secretary of the Army (Civil Works). I am pleased to appear before you today to discuss H.R. 4317.

I would like to preface my statements today by pointing out that the Norfolk and Wilmington District Engineers, the Chief of Engineers, the Assistant Secretary of the Army for Civil Works and the Secretary of the Army have been named as defendants in a lawsuit brought by the State of North Carolina over the Lake Gaston permit. In order not to jeopardize the legal position of the United States, I will not engage in extensive comments about that litigation. Instead I will address the factual steps taken in the permit process.

The purpose of H.R. 4317 is to require the Department of the Army to prepare a full environmental impact statement prior to issuing a permit, under section 10 of the River and Harbor Act of 1899 or under section 404 of the Clean Water Act, for the construction by the City of Virginia Beach, Virginia, of a water supply pipeline and related structures for removing water from Lake Gaston on the border between Virginia and North Carolina. As I will elaborate shortly, the permit required for construction has already been issued on the basis that its issuance is in the public interest. An environmental assessment resulted in a finding that the proposal would not involve a significant environmental impact and hence an Environmental Impact Statement was not required. However, even if the permit had not yet been issued, the Department of the Army would still have concerns with enactment of the bill. We believe it might well interfere with the Department's implementation of our regulatory authorities. Further, in the instant case full public involvement and full environmental analysis occurred in accordance with established Federal laws and regulations before it was determined that an EIS was not required. For example, three public hearings have been held and two versions of the environmental assessment have been circulated and reviewed by all interested parties.

As you know, the National Environmental Policy Act (NEPA) requires all Federal agencies to prepare a detailed Environmental Impact Statement (EIS) for "major Federal actions significantly affecting the quality of the human environment." The President's Council on Environmental Quality (CEQ) has published regulations (40 CFR 1500–1508) defining the pertinent terms of NEPA and outlining how Federal agencies should comply with its provisions. In 1980 the Corps published its own regulations (33 CFR 230) which implement the Council's regulations with regard to Corps Civil Works operations. The Army through the Corps of Engineers performs environmental analyses for every permit. Corps regulations identify regulatory permits as being in a category of actions which normally require an Environmental Assessment (EA), but not necessarily an EIS. And EA is a document which provides sufficient information on potential environmental effects of a proposed action and its alternatives to assist the agency in complying with NEPA and making its public interest decision on the permit request. In this case the District Engineer is the Corps official responsible for making the decisions required under NEPA. If an EA should identify any environmental impacts which are significant (as defined by the CEQ regulations), an EIS would be required.

The City of Virginia Beach began preapplication coordination with the Norfolk District about the city's proposed Lake Gaston project in November, 1982. In March, 1983 the project was discussed at an interagency meeting held at the Norfolk District with representatives of the United States Fish and Wildlife Service, the Environmental Protection Agency, the National Marine Fisheries Service, and State agencies from Virginia and North Carolina to determine what scientific information should be gathered so that the Corps and the other regulatory and advisory agencies could make their decisions or recommendations. During the spring and early summer the City and its consultant gathered this information into an environmental report, which was submitted on July 15, 1983, to the Norfolk District along with their signed permit application pursuant to Section 10 of the River and Harbor Act and Section 404 of the Clean Water Act. Ten days later the District published a

public notice describing the project and announcing the scheduling of a public hearing.

As described in the public notice, the proposed project would consist of the construction of an 84.5 mile-long, 60-inch diameter pipeline from Pea Hill Creek, a branch of Lake Gaston in Brunswick County, Virginia, to an existing raw water pipeline in Suffolk, Virginia, owned by the City of Norfolk. The estimated total cost of the project is about $176 million. The intake structure in Pea Hill Creek would utilize state-of-the-art technology to minimize its effects on fish, currents, and human recreation. Virginia Beach was proposing an initial intake of approximately 10 million gallons per day in the year 1990, to be increased gradually to serve expected growth in population up to 60 million gallons per day by the year 2030.

On August 25 the Norfolk District held a public hearing in Lawrenceville, Virginia, the county seat of Brunswick County, located approximately 15 miles from the site of the proposed intake. The hearing was attended by approximately 2500 people, including many elected and appointed officials, and the statements made were almost unanimously in opposition.

The District Engineer examined the actual impacts on the human environment and made a preliminary determination that they were not significant, and that no EIS would be required. Due to the public controversy, however, the District Engineer decided to make the Draft EA and Finding of No Significant Impact (FONSI) available for a 30-day public review pursuant to the CEQ NEPA regulations before making a final determination. The Draft EA discussed project impacts in such areas as water quality, hydrology, socioeconomics, fish and wildlife, navigation and recreation, and addressed every project alternative raised subsequent to the July 25 public notice.

During the 30-day review period for the Draft EA and FONSI, additional public hearings were held in Roanoke Rapids, North Carolina and Virginia Beach, Virginia. They were attended by a total of more than 3500 people, with opponents outnumbering proponents at the former, and vice versa at the latter. The volume of letters received by the District continued to be heavy, with letters to support outnumbering letters of opposition. Generally, opponents of the project include residents and property owners around the Roanoke River and its lakes, North Carolina state agencies, and North Carolina Governor Hunt. Supporters of the project generally include residents of Virginia Beach, Virginia state agencies and Virginia Governor Robb. No objections to the project or recommendations for preparation of an EIS were received from the U.S. Fish and Wildlife Service, Environmental Protection Agency and National Marine Fisheries Service.

On December 7, 1983 the Norfolk District Engineer circulated his Final EA and Final FONSI for a 30-day comment period. This EA addressed the pertinent substantive comments received. The Final ER cited 20 references, comprised of studies, reports, letters and personal communications, supporting the statements made in the EA. The FONSI indicated that, after careful consideration, there was no environmental or legal reason requiring the preparation of an EIS.

Compared with previous public notices for the Lake Gaston project, relatively few comments were received on the Final EA and FONSI. After the close of the comment period and review of the comments, the District Engineer signed his Statement of Findings and the permit was issued on January 9, 1984.

Mr. Chairman, I would like to take a few moments to look at the regulatory program in a broader perspective.

I believe very strongly that a project should succeed or fail on its own merits and not on its ability to keep from getting strangled in red tape.

The program had gotten out of hand and our regulatory reform measures have tried to bring it back into proper perspective. We have been partially successful in those efforts. We have reduced the average processing time for an application by 40 percent without reducing environmental protections. The lawsuit which has been pending against our July 1982 regulations is near settlement without losing the effect of our reforms. We still have pending, however, revisions of other very complex regulations. Proposed changes to our own regulations which implement the National Environmental Policy Act were published last month and we hope to get final rules published this summer. We are also working with EPA to get final rules published this summer. We are also working with EPA on changes to EPA's regulations to make it more attractive to the states to take over the 404 program. These will help somewhat but many of the concerns which were at the heart of our regulatory reform efforts remain.

We are also exploring with EPA possible ways to clarify the scope of jurisdiction of the Clean Water Act, and streamline the 404(b)(1) guidelines, which EPA pub-

lishes. We have made little progress in streamlining the regulations to implement the National Historic Preservation Act.

In addition, there have been occasions where the complexity of the program has put the Corps in a position of deciding significant issues unrelated to the underlying goals of the statutes and has provided opportunities for project opponents to delay the Corps decision process on grounds also unrelated to Corps statutory authorities.

We will continue to work toward administrative solutions to these concerns. But as Mr. Gianelli mentioned in his remarks to your Subcommittee hearings on the Clean Water Act last November, Congress may wish to look at some of these issues to help clarify the will of the Congress. We would urge the Committee to support out continuing regulatory reform efforts.

That concludes my remarks, Mr. Chairman. I will be pleased to respond to any questions you may have.

Mr. ROE. Please proceed.

TESTIMONY OF HON. ROBERT K. DAWSON, DEPUTY ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS), ACCOMPANIED BY BRIG. GEN. C. ERNEST EDGAR III, DEPUTY DIRECTOR OF CIVIL WORKS, U.S. ARMY CORPS OF ENGINEERS; AND MORGAN REES, REGULATORY ADVISER

Mr. DAWSON. Thank you very much, Mr. Chairman. We are very pleased to appear before you today to discuss H.R. 4317.

I would like to introduce, as you have already done, Brig. Gen. Ernie Edgar, who is the Deputy Director of Civil Works, and Mr. Morgan Rees, who is our Regulatory Adviser in the Office of the Assistant Secretary of the Army.

In the interest of your time, Mr. Chairman, and Mr. Stangeland's and the committee's, I would like to summarize my full statement.

The purpose of H.R. 4317 is to require the Army Corps of Engineers to prepare an environmental impact statement, prior to issuing a permit for activities associated with construction of the water supply line between Lake Gaston on the Virginia and North Carolina border, and Virginia Beach, Va.

As you may know, the permit has already been issued, and suit has been filed by the State of North Carolina against the issuance of the permit. I understand there are countersuits involved as well.

Because of the pending litigation, Mr. Chairman, I will confine my remarks to the history of the case, to demonstrate that the proposed legislation may well interfere with the established administrative processes, and that all necessary and proper evaluation and coordination has already occurred.

Beginning in November 1982 and culminating with the permit's issuance in January 1984, the proposal has been subjected to several preapplication coordination meetings among the applicant, which itself is a governmental entity, and the interested State and Federal agencies. Based on discussions at those meetings, the city of Virginia Beach submitted its permit application with a full environmental report.

The corps then issued a public notice, soliciting comments from all interested parties. Based on a review of public comments, the corps held a public hearing, after which it prepared a draft environmental assessment and finding of no significant impact. The EA and FONSI were circulated for review to all interested parties.

During that review period, two additional public hearings were held. The final environmental assessment and finding of no signifi-

cant impact were circulated, once again for an additional 30 day comment period.

Not until all of these lengthy coordination and evaluation steps were completed, and all of the issues clearly documented, did the corps finally act to issue the permit. It is difficult to imagine how preparation of an EIS for this case would enhance the decisionmaking process, or provide for any better environmental analysis. It would serve only to delay the decision which the applicant has a right to expect would be made in a reasonable amount of time, whether that decision is yes or no. We feel the applicant has that right to get a speedy decision.

The case has been under intensive review for 15 months now, and delaying a decision which the responsible Federal official believes can and should be made with the information now in hand would be unwarranted.

Mr. Chairman, very briefly, as a more general matter, I would like to point out several areas of the corps' regulatory program which can be used for purposes other than those which Congress originally intended.

Under the River and Harbor Act and the Clean Water Act, the corps is responsible for the regulatory program, as you well know. But because of extensive judicial rulings and implementing regulations, the corps has been put into many areas of public policy and decisionmaking which are unrelated to clean water and water quality.

We have tried to clarify the role of the corps' regulatory program, and have been partially successful. However, we have met stiff opposition all along the way to reform of the corps' regulatory program, and we continue to find opposition to proposals which would clarify the corps' role and make the decision process move more quickly.

We believe that some of that opposition reflects well—meaning and valid concerns, but much of it may be simply trying to make the program as complex as possible, to give project opponents more opportunity for delay and legal challenge.

We believe, finally, Mr. Chairman, very strongly, that a proposal should succeed or fail on its own merits and not on its ability to withstand an unnecessarily complex regulatory system. We will continue to work toward that goal, and urge the Subcommittee to continue to support our regulatory reform efforts.

We believe that environmental concerns must be given full and fair consideration, but once that has occurred, and we feel it has in this case, the decisionmaker must be allowed to make a decision. Otherwise governmental paralysis results.

Thank you very much, Mr. Chairman. We are available to answer any questions you may have.

Mr. ROE. We want to thank you for your statement.

Let me ask you this question. I think it would be helpful for the committee. On page 3 of your formal testimony, the last paragraph, you lay out, in effect, what the proposed project is about. I think that would be important to point out. I understand some of the background, but I think it would be helpful to get formally on the record what the program and what this project is specifically about, and we can proceed from that point.

Mr. DAWSON. Very good. I think that is a good suggestion, Mr. Chairman.

The project would consist of an 84.5-mile long, 60-inch diameter pipeline, from Pea Hill Creek, which is a branch of Lake Gaston, in Brunswick County, Va., to an existing raw water pipeline in Suffolk, Va., owned by the city of Norfolk. The estimated total cost of the project is about $176 million. The intake structure in Pea Hill Creek, which I think is the main purpose of the Corps of Engineers' permit, would utilize state-of-the-art technology to minimize its effects on fish, currents, and human recreation.

Virginia Beach was proposing an initial intake of approximately 10 million gallons per day in the year 1990, to be increased gradually to serve expected growth in population to 60 million gallons per day by the year 2030.

Mr. ROE. All right. Now, if I can ask the next question.

Does the corps have any jurisdiction over—let me rephrase that.

For the record, we are speaking about water resources out of Lake Gaston, is that correct?

Mr. DAWSON. Yes, sir.

Mr. ROE. Now, who owns Lake Gaston? What is the history on that background there?

Mr. DAWSON. I believe it is——

Mr. ROE. General, can you help us out?

Mr. DAWSON. It is a Vepco reservoir, Mr. Chairman.

Mr. ROE. Is it privately owned?

Mr. DAWSON. Yes, sir.

Mr. ROE. So therefore it is a privately owned reservoir that is involved, is that correct?

Mr. DAWSON. Yes, sir.

Mr. ROE. And therefore there is the quantitative waters of allocation, and so forth, involved. The corps has no jurisdiction over that, do they?

Mr. DAWSON. Yes, sir. Let me ask General Edgar to comment on the water allocation aspects because in addition to the 404 permit, which my testimony has addressed, a different district of the corps also is involved in the water allocation issue.

Mr. ROE. General, will you explain that to us?

General EDGAR. One moment, please, Mr. Chairman.

Mr. ROE. In other words, our understanding is that from not only reviewing this testimony, that the Gaston Lake really is a bulge, if you would like, in the water supply system, and the release of allocation of waters would actually come out of Kerr Lake, too, which replenishes the water that is drafted out there.

Now, the question is, Does the corps have the authority to enter into contracts of this nature?

General EDGAR. Yes, sir, we have the authority for the reallocation in this instance.

Mr. ROE. OK. And is the Kerr Lake project owned by the Federal Government?

General EDGAR. Yes, sir, it is a corps' project for flood control and hydropower.

Mr. ROE. OK. And you might want to get it for the record, if you do not have it with you today, a statement as to the authority of

the corps, existing law as it relates to Kerr Lake, and your authority to allocate those water supply systems.

General EDGAR. We will be happy to provide that for the record.

[The following was received for the record from General Edgar:]

RESPONSE FROM GENERAL EDGAR

At this project, storage space for municipal and industrial water supply is being added pursuant to the authority contained in the 1958 Water Supply Act (Title III of Public Law 85-500, as amended). This Law provides that any existing Corps of Engineers reservoir project may be modified to include storage space for water supply provided the value of such storage is repaid by the non-Federal interest. Such reallocation must be approved by Congress only if the action would seriously affect the purposes for which the project was constructed or would involve major structural or operational changes. At this project, the Corps is reallocating 10,200 acre-feet of storage space from the originally authorized purpose of hydroelectric power. This storage reallocation will not reduce hydroelectric power revenues or benefits since only about 1 percent of the 957,000 acre-foot hydroelectric power pool is being affected. The value of this storage space was obtained by updating the pro rata share of total project joint-use construction costs to current price levels by use of the Engineering News Record Construction Index. This value, $2,275,685 was paid in full by the City of Virginia Beach on February 7, 1984.

Mr. ROE. That sets the whole case, is what it amounts to. So there are two issues involved here.

All right, I do not have any further questions.

Anybody have any questions?

All right, the gentleman from Minnesota.

Mr. STANGELAND. Yes, Mr. Dawson, what are the current allocations of water in Kerr Reservoir, and what are the current uses of that water within that reservoir, within Gaston Lake, in percentage and volume?

Mr. DAWSON. Mr. Stangeland, I would like to provide you the exact data on that for the record. The allocation is total, about 10,000 acre feet. Of course, hydroelectric power generation and flood control are the main purposes of the Kerr Reservoir, and Lake Gaston, as General Edgar pointed out, is a Vepco hydroelectric reservoir.

Mr. STANGELAND. What is the status of request for water rights and reallocation within our reservoir?

Mr. DAWSON. General Edgar may want to expand on this, but the Corps of Engineers has approved an allocation for this water withdrawal, and a contract has been signed with the city of Virginia Beach for the withdrawal of the water.

General EDGAR. That is so, sir, and I think there also has been a payment made and received, the exact amount escapes me at the moment, but I believe a financial transaction has been received. I could provide that for the record.

Mr. STANGELAND. Could we get a copy of that contract?

General EDGAR. Yes, sir.

[The following was received from General Edgar:]

CONTRACT BETWEEN THE UNITED STATES OF AMERICA AND THE CITY OF VIRGINIA BEACH, VA., WATER STORAGE SPACE IN JOHN H. KERR RESERVIOR

This contract, entered into this 13th day of January, 1984, by and between the United States of America (hereinafter called the "Government") represented by the Contracting Officer executing this contract, and the city of Virginia Beach (hereinafter called the "City");

Witnessth that:

Whereas, the Flood Control Act of 1944 (Public Law 534, 78th Congress), authorized the construction, operation, and maintenance of the John H. Kerr Dam and Reservior on Roanoke River, Virginia and North Carolina, (hereinafter called the"Project");

Whereas, the City desires to contract with the Government for the use of storage included in the Project under the discretionary authority of the Chief of Engineers for municipal and industrial water supply, and for payment of the cost thereof in accordance with the provisions of the Water Supply Act of 1958, as amended (43 U.S.C. 390b-f); and

Whereas, the City is empowered to contract with the Government and is vested with all necessary powers of accomplishment of the purposes of this contract, including those required by Section 221 of the Flood Control Act of 1970 (42 U.S.C. 1962d-5d) (as amended);

Now, therefore, the Government and the City agree as follows:

ARTICLE 1—WATER STORAGE SPACE

(a) Project construction

The Government, subject to the directions of Federal law and any limitations imposed thereby, has designed and constructed the Project so as to include therein space for the storage of water by the City.

(b) Rights of city

(1) The City shall have the right to utilize an undivided 1.066 percent (estimated to contain 10.200 acre-feet after adjustment for sediment deposits) of the usable storage space in the Project between elevations 268 feet above mean sea level and 300 feet above mean sea level, which usable conservation storage space is estimated to contain 956,900 acre-feet after adjustment for sediment deposits.

(2) The City shall have the right to order releases to be made by the Government through the outlet works in the Dam, subject to the provisions of Article 1(c) and to the extent the aforesaid storage space will provide.

(c) Rights reserved

The Government reserves the right to maintain at all times downstream releases through the turbines, gates, or spillway of the dam to meet established water requirements. The Government further reserves the right to take such measures as may be necessary in the operation of the Project to preserve life and/or property, including the right not to make downstream releases during such periods of time as are deemed necessary, in its sole discretion, to inspect, maintain, or repair the Project.

(d) Quality of availability of water

The City recognizes that this contract provides storage space for raw water only. The Government makes no representations with respect to the quality or availability of water and assumes no responsibility therefor, or for the treatment of the water.

(e) Sedimentation surveys.

(1) Sedimentation surveys will be made by the Contracting Officer during the term of this contract at intervals not to exceed fifteen (15) years unless otherwise agreed to in writing by both parties. When, in the opinion of the Contracting Officer, the findings of such survey indicate any project purpose will be affected by unanticipated and sedimentation distribution, there shall be an equitable redistribution of the sediment reserve storage space among the purposes served by the Project including municipal and industrial water supply. The total available remaining storage space in the Project will then be divided among the various Project features in the same ratio as was initialy utilized. Adjusted pool elevations will be rounded to the nearest one-half foot. Such findings and the storage space allocated to municipal and industrial water supply shall be defined and described as an exhibit which will be made a part of this contract and the reservoir regulation manual will be modified accordingly.

(2) The Government assumes no responsibility for deviations from estimated rates of sedimentation, or the distribution thereof. Such deviations may cause unequal distribution of sediment reserve storage greater than estimated, and/or encroachment on the total storage at the Project.

ARTICLE 2—REGULATION OF AND RIGHT TO USE OF WATER

The regulation of the use of water released from the aforesaid storage space shall be the sole responsibility of the City. The City has the full responsibility to acquire in accordance with state laws and regulations, and, if necessary, to establish or defend, any and all water rights needed for utilization of the storage provided under this contract. The Government shall not be responsible for diversions by others, nor will it become a party to any controversies involving the use of the storage space by the City except as such controversies may affect the operations of the Government.

ARTICLE 3—OPERATION AND MAINTENANCE

The Government shall operate and maintain the Project and the City shall pay to the Government a share of the costs of such operation and maintenance as provided in Article 5. The City shall be responsible for operation and maintenance of all installations and facilities which it may construct for the diversion or withdrawal of water, and shall bear all costs of construction, operation and maintenance of such installations and facilities.

ARTICLE 4—MEASUREMENT OF WITHDRAWALS AND RELEASES

The City agrees to furnish and install, without cost to the Government, suitable meters or measuring devices satisfactory to the Contracting Officer for the measurement of water withdrawn pursuant to this contract. The City shall furnish to the Government monthly statements of all such withdrawals. Prior to the construction of any facilities for withdrawal of water, the City will obtain the Contracting Officer's approval of the meters or measuring devices. Such devices shall be available for inspection by Government representatives at all reasonable times. Releases from the water supply storage space through the Project outlet works shall be made in accordance with written schedules furnished by the City and approved by the Contracting Officer and shall be subject to Article 1(c). The measure of all such releases shall be by means of a rating curve of the outlet works, or by such other suitable means as may be agreed upon prior to use of the water supply storage space.

ARTICLE 5—PAYMENTS

In consideration of the right to utilize the aforesaid storage space in the Project for municipal and industrial water supply purposes, the City shall pay the following sums to the Government:

(a) Project investment costs

(1) The City shall repay to the Government the amounts stated below which, as shown in Exhibit "A" attached to and made a part of this contract, constitute the entire actual amount of the construction costs, escalated to present day price levels by use of the Engineering News Record Construction Index effective at the beginning of the fiscal year in which the payment is due, allocated to the water storage right acquired by the City under this contract.

(2) The Project investment costs allocated to the storage space indicated in Article 1(b)(1) is $2,275,685, on the basis of the costs presented in Exhibit "A." The amount of the Project investment costs allocated to water supply storage shall be due and payable within 30 days after the City is notified by the Contracting Officer that the contract is approved.

(b) Major replacement cost

(1) The City will be required to pay 0.462 percent of the cost of joint-use major replacement items.

(2) Payment: Payment of costs, including interest during construction, shall be made either incrementally during construction or in lump sum upon completion of construction.

(c) Annual operation and maintenance (O&M) expense

(1) The City shall be required to pay 0.462 percent of the annual experienced joint-use O&M expense of the Project.

(2) Payment: The first payment for O&M expense for water supply storage is due and payable in advance on the date for payment of Project investment costs as set forth in Article 5(a)(2) and shall be based on O&M expense for the Project in the Government fiscal year most recently ended. Subsequent payments thereafter will be due and payable on the anniversary of the first payment date. The amount of each annual payment will be the actual experienced O&M expense (allocated joint-

use) for the preceding fiscal year or an estimate thereof when actual expense information is not available.

(d) Major rehabilitation and dam safety assurance programs costs

For costs associated with major rehabilitation programs the percentage of joint use costs which the City will be required to pay will be in accordance with Article 5(c) for water supply storage. For costs associated with dam safety assurance programs, the percentages of joint use costs which the City will be required to pay will be in accordance with Article 5(c) for water supply storage. Payments for the costs associated with both programs shall be in accordance with Article 5(b)(2).

(e) The City will repay to the Government all Project investment costs as stated in Article 5(a)(2). If the City does not complete the withdrawal facilities and utilize the storage space in Kerr, it will be entitled to a partial refund of the Project investment costs prepaid. The refund will be equal to the Project investment cost paid by the Ciy reduced by 2 percent for each year or part of a year that the City owned the storage.

(f) Delinquent payments.

If the City shall fail to make any of the aforesaid payments when due, then the overdue payments shall bear interest compounded annually until paid. The interest rate to be used for overdue payments under the provisions of Articles 5(a), 5(b), 5(c), and 5(d) above shall be that determined by the Department of Treasury's Treasury Fiscal Requirements Manual (1 TFRM 6-8000, "Cash Management"). The amount charged on payments overdue for a period of less than one year shall be figured on a monthly basis. For example, if the payment is made within the first month after being overdue after a 15-day grace period from the anniversary date of the date of notification, one month's interest shall be charged. Thereafter a month's interest will be charged for any portion of each succeeding month that the payment is delinquent. This provision shall not be construed as giving the City a choice of either making payments when due or paying interest, nor shall it be construed as waiving any other rights of the Government, at law or in equity, which might result from any default by the City.

ARTICLE 6—ADJUSTMENT TO PROJECT CONSTRUCTION COST

The construction cost shown in this contract and the exhibits is based on actual final construction costs. Any further construction cost accruing to the City's water storage right shall be repaid under major replacement if capitalized or under O&M expense if not capitalized.

ARTICLE 7—DURATION OF CONTRACT

This contract shall become effective when approved by the Secretary of the Army or his duly authorized representative and shall continue in full force and effect for the life of the Project.

ARTICLE 8—PERMANENT RIGHTS TO STORAGE

Upon completion of the payment by the City as provided in Article 5(a) herein, the City shall have a permanent right, under the provisions of the Act of 16 October 1963 (Public Law 88-140, 43 U.S.C. 390e), to the use of the water supply storage space in the Project as provided in Article 1, subject to the following:

(*a*) The City shall continue payment of annual operations and maintenance costs allocated to water supply.

(*b*) The City shall bear the costs allocated to water supply of any necessary reconstruction, rehabilitation, or replacement of Project features which may be required to continue satisfactory operation of the Project. Such costs will be established by the Contracting Officer and repayment arrangements shall be in writing in accordance with the terms and conditions set forth in Article 5(b)(2) for Major Replacement Costs, and be made a part of this contract.

(*c*) Upon completion of 50 years of operation under this contract, the Contracting Officer shall redetermine the storage space for municipal industrial water supply in accordance with the provisions of Article 1(e). Such redetermination of reservoir storage capacity may be further adjusted from time to time as the result of sedimentation resurveys to reflect actual rates of sedimentation and the exhibit revised to show the revised storage space allocated to municipal and industrial water supply.

(*d*) The permanent rights of the City under this contract shall be continued so long as the Government continues to operate the Project. In the event the Govern-

ment no longer operates the Project, such rights may be continued subject to the execution of a separate contract, or additional supplemental agreement providing for:

(1) Continued operation by the City of such part of the facility as is necessary for utilization of the water supply storage space allocated to it;

(2) Terms which will protect the public interest; and

(3) Effective absolvement of the Government by the City from all liability in connection with such continued operation.

ARTICLE 9—RELEASE OF CLAIMS

The City shall hold and save the Government, including its officers, agents and employees harmless from liability of any nature or kind for or on account of any claim for damages which may be filed or asserted as a result of the storage in the Project, or release of water from the Project, ordered by the City or as a result of the construction, operation, or maintenance of the water supply facilities and appurtenances thereto owned and operated by the City except for damages due to the fault or negligence of the Government or its contractors.

ARTICLE 10—ASSIGNMENT

The City shall not transfer or assign this contract or any rights acquired thereunder, nor suballot said water supply storage space or any part thereof, nor grant any interest, privilege or license whatsoever in connection with this contract, without the approval of the Secretary of the Army, or his duly authorized representative provided that, unless contrary to the public interest, this restriction shall not be construed to apply to any water that may be obtained from the water supply storage space by the City and furnished to any third party or parties, nor any method of allocation thereof.

ARTICLE 11—OFFICIALS NOT TO BENEFIT

No member of or delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 12—COVENANT AGAINST CONTINGENT FEES

The City warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee excepting bona fide employees or bona fide established commercial or selling agencies maintained by the City for the purpose of securing business. For breach or violation of this warranty the Government shall have the right to annul this contract without liability or in its discretion to add to the contract price or consideration, or otherwise recover the full amount of such commission, percentage, brokerage, or contingent fee.

ARTICLE 13—ENVIRONMENTAL QUALITY

During any construction, operation, and maintenance by City of any facilities, specific actions will be taken to control environmental pollution which could result from such activity and to comply with applicable Federal, State, and local laws and regulations concerning environmental pollution. Particular attention should be given to (1) reduction of air pollution by control of burning, minimization of dust, containment of chemical vapors, and control of engine exhaust gases, and of smoke from temporary heaters; (2) reduction of water pollution by control of sanitary facilities, storage of fuels and other contaminants, and control of turbidity and siltation from erosion; (3) minimization of noise levels; (4) onsite and offsite disposal of waste and spoil; and (5) prevention of landscape defacement and damage.

ARTICLE 14—FEDERAL AND STATE LAWS

(a) In acting under its rights and obligations hereunder, the City agrees to comply with all applicable Federal and State laws and regulations, including but not limited to the provisions of the Davis-Bacon Act (40 U.S.C. 276 et seq.); the Contract Work Hours and Safety Standards Act (40 U.S.C. 327–333); Title 29, Code of Federal Regulations, Part 3; and Sections 210 and 305 of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91–646). The provi-

sions of this subparagraph shall apply only to construction by the City on Project lands or Project properties.

(b) The City furnishes, as part of this contract, an assurance (Exhibit B) that it will comply with Title VI of the Civil Rights Act of 1964 (78 Stat. 241, 42 U.S.C. 2000d, et seq.) and Department of Defense Directive 5500.11 issued pursuant thereto and published in Part 300 of Title 32, Code of Federal Regulations.

(c) Any discharges of water or pollutants into a navigable stream or tributary thereof resulting from the City's facilities and operations undertaken under this contract shall be performed only in accordance with applicable Federal, State, and local laws and regulations.

ARTICLE 15—DEFINITIONS

(a) Project investment costs

The initial cost of the Project, including: land acquisition; construction; interest during construction on the value of land, labor, and materials used for planning and construction of the Project.

(b) Specific costs

The costs of Project features normally serving only one particular project purpose.

(c) Joint-use costs

The cost of features used for any two or more Project purposes.

(d) Annual operation and maintenance (O&M) expense

Annual expenses funded under the O&M, General account. These expenses include the daily project O&M costs as well as those O&M costs which are capitalized.

(e) Major replacement cost

Costs funded under the Construction, General account but not associated with initial Project investment costs.

(f) Fiscal year

Refers to the Government's fiscal year. This year begins on 1 October and ends on 30 September. The September calendar year corresponds to the fiscal year.

(g) Life of the project

This is the physical life of the project.

(h) Major rehabilitation

This program is to facilitate accomplishment of significant, costly infrequent rehabilitation work at the Project without unduly distorting the Operation and Maintenance General budget.

(i) Dam safety assurance program

This program is to provide for modification of the completed Project to rectify potential safety hazards in light of present day standards, technology, and circumstances.

ARTICLE 16—APPROVAL OF CONTRACT

This contract shall be subject to the written approval of the Secretary of the Army or his duly authorized representative and shall not be binding until so approved.

In witness whereof, the parties have executed this contract as of the day and year first above written.

APPROVED:

William B Ginsella
Assistant Secretary of the Army
(Civil Works)

DATE: 30 JAN 1984

THE UNITED STATES OF AMERICA

By Wayne A Hanson
(Contracting Officer)
13 Jan 84

CITY OF VIRGINIA BEACH, VIRGINIA

By Thomas H Muehlenbeck
City Manager of Virginia Beach
January 12, 1984

ATTEST:

Ruth Hodges Smith
City Clerk of Virginia Beach

CERTIFICATION

I, J. Dale Bimson, City Attorney for the City of Virginia Beach, Virginia, hereby certify that the foregoing agreement executed by City Manager Thomas H. Muehlenbeck of the City of Virginia Beach, is within the scope of his authority to act upon behalf of the City of Virginia Beach, and that in my capacity as City Attorney for the City, I have considered the legal effect of Section 221 of the 1970 Flood Control Act (Public Law 91-611) and find that the City is legally and financially capable of entering into the contractual obligations contained in the foregoing agreement and that, upon acceptance, it will be enforceable.

Given under my hand, this 12th day of January 1984.

J. DALE BIMSON,
City Attorney for the City of Virginia Beach.

EXHIBIT A

I—LAKE STORAGE

Feature	Elevation (ft., m.s.l.)	Usable storage [1] (ac.-ft.)	Percent of	
			Usable storage	Conservation storage
Flood control	320-300	1,251,400	56.668	
Conservation:	300-268	956,900	43.332	100.000
Water supply		(10,200)	0.462)	1.066
User—City of Virginia Beach		(10,200)	0.462	1.066
Hydropower		(946,700)	42.870	98.934
Total		2,208,300	100.000	

[1] Storage remaining after 100 years of sedimentation from the date the Project became operational, July 1953.

II—ALLOCATION OF CONSTRUCTION COST

Feature	Cost	Percent of project joint-use construction cost
Flood control	$18,023,000	
Specific	(0)	
Joint-use	(18,023,000)	31.65
Recreation	0	

II—ALLOCATION OF CONSTRUCTION COST—Continued

Feature	Cost	Percent of project joint-use construction cost
Specific	(0)	
Joint-use	(0)	0
Water supply	0	
Specific	(0)	
Joint-use	(0)	0
Hydropower	69,127,000	
Specific	(30,205,300)	
Joint-use	(38,921,700)	68.35
Total joint-use	56,944,700	100.00

III—Construction Costs To Be Repaid by the City for Water Supply Storage

Project construction initiated: February 1946.
Closure: July 1953.
Mid point of construction period: October 1949.
ENR Index: Oct 1949: 477.
ENR Index: Oct 1983: 4127.
4127/477 = 8.65
Project joint-use construction cost x contract storage over total usable storage.
$56,944,700 \times 10,200/2,208,300 = 56,944,700 \times .00462 = \$263,085$
Updated cost: $263,085 \times 8.65 = \$2,275,685$.

IV—Annual Costs to City for Use of Water Supply Storage Space

Interest and amortization:	
Operation and maintenance [1]: joint use 0.462% × $1,297,929	6,000
Major replacement [2]: Joint use 0.462% × 106,100	490
Total estimated annual cost	6,490

[1] Payment due and payable on the date specified in Article 5(a)(2).
[2] Major replacement costs are payable only when incurred as specified in Article 5(b)(2). It is suggested that the amount shown be placed in a reserve or sinking fund for future contingency.

Exhibit B

Assurance of Compliance With the Department of Defense Directive Under Title VI of the Civil Rights Act of 1964

The City of Virginia Beach, Virginia (hereinafter called "City") hereby agrees that it will comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352) and all requirements imposed by or pursuant to the Directive of the Department of Defense (32 CFR Part 300, issued as Department of Defense Directive 5500.11, December 28, 1965) issued pursuant to that title, to the end that, in accordance with Title VI of that Act and the Directive, no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the City receives Federal financial assistance from the Department of the Army and hereby gives assurance that it will immediately take any measures necessary to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to the City by this Department of the Army, assurance shall obligate the City, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which the Federal financial assistance is extended or for another purpose involving the provisions of similar services or benefits. If any personal property is so provided, this assurance shall obligate the City for the period during which it retains ownership or possession of the property. In all other cases, this assurance shall obligate the City for the period during which the Federal financial assistance is extended to it by the Department of the Army.

This Assurance is given in consideration of and for the purpose of obtaining any and all federal grants, loans, contracts, property, discounts or other Federal financial assistance extended after the date thereof to the City by the Department of the Army, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The City recognizes and agrees that such Federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the City, its successors, transferees, and assignees, and the person or persons whose signatures appear below are authorized to sign this assurance on behalf of the City.

CITY OF VIRGINIA BEACH, VIRGINIA,
By THOMAS H. MUEHLENBECK
City Manager, City of Virginia Beach.

Dated January 12, 1984.
Virginia Beach, Virginia 23456.

Mr. STANGELAND. It is my understanding that the Wilmington district leads the worst case conditions, are the worst case conditions, a drawndown level would be slightly more than 2 inches, that would be in addition to a 7-foot drawdown caused by a worst case drought.

What is the range of water level fluctuation normally experienced in the Kerr Reservoir?

General EDGAR. Sir, it is approximately 7 feet on the historical basis, to my knowledge, we can provide specifics for the record, if you so desire.

Mr. STANGELAND. Is this a hilly terrain, is it a flat terrain? What is the topography of that area?

General EDGAR. Kerr Lake is located in the rolling hills of the Piedmont Province of Virginia and North Carolina. The Roanoke drainage basis extends to the eastern Continental Divide west of Roanoke, Va.

Mr. STANGELAND. How is Kerr Lake and Gaston Lake charged? Where is their water supply coming from?

General EDGAR. Roanoke River.

Mr. STANGELAND. That comes from further east—further west?

General EDGAR. Yes, sir, further west.

Mr. ROE. Where does the Roanoke River originate, is it inside Virginia, or outside of Virginia? Does anybody know? What border?

Well, let me suggest to those people who are going to be testifying, there are certain basic data that we really have to find out, and it seems to me that you were called upon to testify to the specific issue at hand, which was the legislation pending, in effect, to deny the corps the authority to issue that permit. That is what you testified to. So some of these other questions I think are important to the overall thought process of this committee.

For example, I do not know whether Kerr Lake, per se, was totally federally funded. I think that is an important issue, and it would seem to me, No. 2, we would have to know, for example, have there been—are there any other water allocations out of Kerr Lake, and if so, to where? So we need some historical background here, and factual background, because under the basic statute, as I understand it, the corps has the authority to allocate water resources, provided it is within the concept of the basic project to begin with, and that it does not necessarily severely denegrate those intents.

Otherwise you would have to come back to Congress for an act of Congress to move that particular issue. So apparently when the contract was entered into the corps made those judgmental values based upon the data that they had before them, and in accordance with the law.

But in order for us to look into this further, we do want to get that background information as to, the capacity of the reservoir, the issues of the law involved, whether or not there are other people drawing, and what are the reserves there.

Are there additional reserves in that system that could be allocated for water supply? Obviously part of this concern which we are going to hear on is based upon the point of view that the reservoir, in effect, and the system is located in one State, and another State that is asking for water supply from it.

But I think that background information becomes important to this committee.

Mr. STANGELAND. Mr. Chairman, I think it also would be helpful if the corps could provide some historical data over the past 5 years, or 7 years, that would give us a better feel for the kind of water level fluctuations that are experienced without the project.

Mr. DAWSON. We could do that.

[The following was received for the record:]

INFORMATION RECEIVED FROM GENERAL EDGAR

The Flood Control Act of 1944 approved an eleven-reservoir system of development of the water resources of the Roanoke River Basin. Six reservoirs of the systems have been completed, two by the Corps of Engineers and four by power companies. The six reservoirs are operated as a system.

The same act authorized the construction of Kerr Project for "control of floods, generation of hydroelectric power, low-water regulation, and other beneficial purposes" (House Document 650, page 89). Kerr was constructed with Federal funds, the cost being allocated 20.7 percent to flood control and 79.3 percent to hydroelectric power.

The Kerr Lake capacity is 2,750,300 acre-feet, 1,278,000 ac-ft for flood control, 1,029,100 ac-ft conservation storages and 443,200 ac-ft inactive storage. The conservation storage is allocated 10,200 ac-ft water, supply for Virginia Beach and 1,028,900 ac-ft to hydroelectric power. Prior to the contract with Virginia Beach, all conservation storage was allocated to hydroelectric power. No other allocations have been made.

Under current laws and regulations, the Corps has authority to allocate 39,800 ac-ft of additional storage in Kerr to water supply without action by Congress.

The drainage area of the Roanoke River at Kerr Dam is 7,800 square miles, approximately 5,900 square miles in Virginia and 1,900 square miles in North Carolina. Kerr Lake is also approximately 75 percent in Virginia and 25 percent in North Carolina. Similarly, Lake Gaston is part in North Carolina and part in Virginia. The intake structure for the Lake Gaston-Virginia Beach pipeline is located in Virginia. During the course of the permit process, many commentators expressed opposition to the interbasin transfer of water. Corps policy on this matter is derived from the language of the Clean Water Act which states:

"It is the policy of Congress that the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated, or otherwise impaired by this chapter" (33 USC 1251 (9)).

HISTORY OF KERR LAKE LEVELS [1]

	Maximum level	Minimum level	Difference in feet
1973	307.42	293.63	13.79
1974	306.47	286.90	19.57
1975	318.85	294.14	24.17
1976	302.58	291.28	11.30
1977	304.46	293.52	10.94
1978	318.75	297.05	21.70
1979	314.96	293.91	19.05
1980	308.32	294.89	13.43
1981	300.40	291.82	7.38
1982	305.56	295.52	10.04
1983	314.35	293.50	20.85

[1] Normal planned annual lake level fluctuation is 6.5 feet between elevations 302 and 295.5.

Mr. ROE. That is the data that we want to get into the record. The gentleman from California.

Mr. PACKARD. Thank you, Mr. Chairman.

Does the Corps usually handle projects of this nature where the determination has been that there is no significant environmental impacts? Is this the standard way that they have handled other projects?

Mr. DAWSON. Yes, sir, there are roughly 18,000 corps permits a year, and probably only 30 of those require an environmental impact statement.

Now, looking very informally yesterday at other water withdrawal type permits specifically, I found that only two out of 13 have required an EIS. So I would say this certainly fits well within the normal practice.

Mr. PACKARD. And other regions where corps projects are addressed, are addressed under the same policies and regulations?

Mr. DAWSON. Yes, sir.

Mr. PACKARD. So that in California, my State, they would be handled precisely the same as you handle this?

Mr. DAWSON. Yes, sir.

Mr. PACKARD. If the bill passed, if this proposed legislation passed, how would it affect your processing of, in the future, of projects similar to this?

Mr. DAWSON. Well, sir, it is certainly a great concern, because the Corps of Engineers is anxious to do the full and fair environmental assessment that is needed. Sometimes that involves an EIS, sometimes—most of the time—it does not. But I would think if the Congress expressed a view on this particular case, it would certainly have potential far-reaching impacts on other similar permits, which is why I referred to our regulatory reform effort, where we are trying to diminish the length of time it takes an individual or a city to get a decision without diminishing the environmental safeguards.

Mr. PACKARD. How much longer? What kind of delays are we talking about?

Mr. DAWSON. The Corps of Engineers estimates that—to have done an EIS here, would have taken at least 6 months, but I am told by others that a more realistic figure would have been 18

months, and of course, during that time the cost of, not this particular project alone, but all projects, continue to go up.

So again, we think it is important, when it is possible to do so, to move as quickly as we can.

Mr. PACKARD. If an environmental impact statement were prepared in this particular case, would that change the general impression of the project, or would it alter in any way what you have already determined?

Mr. DAWSON. That apparently, Mr. Congressman, was the District Engineer's decision, that it would not. Because part of the regulatory process that we have is to first do an environmental assessment, as was done here, and only if there is a reasonable prospect that an EIS would change or bring in significant new findings of environmental impact, do you take that additional time-consuming step.

Mr. PACKARD. Thank you very much.

Mr. ROE. The gentleman from Minnesota.

Mr. STANGELAND. One last question, Mr. Chairman.

It seems rather surprising that there were no objections to the project from Fish and Wildlife, EPA or the National Marine and Fisheries. Were they provided the initial EA and the final EA?

Mr. DAWSON. Yes, sir, Mr. Stangeland. They were full players in this exercise, all the way through, and as you know, are not reticent about objecting to this kind of permit.

Mr. ROE. Thank you.

The gentleman from North Carolina, Mr. Valentine.

Mr. VALENTINE. Thank you, Mr. Chairman.

Mr. Dawson, a lot of the decisions, or the decision with respect to the permit, was that made by Colonel Henson, the decision to issue the permit, was that made by Colonel Henson in Norfolk?

Mr. DAWSON. No, Colonel Hudson, I believe, sir——

Mr. VALENTINE. Colonel Hudson, excuse me.

Mr. DAWSON. Yes, and Colonel Henson, I believe, was involved with the allocation.

Mr. VALENTINE. But Colonel Henson is in Wilmington?

Mr. DAWSON. Yes, sir.

Mr. VALENTINE. That decision was made by—to issue the permit, was made by Colonel Hudson?

Mr. DAWSON. Yes, sir.

Mr. VALENTINE. Is he here today?

Mr. DAWSON. I believe he was here earlier, but I do not believe he is in the room.

Mr. VALENTINE. But you do not have him scheduled to answer any questions, or to make any testimony?

Mr. DAWSON. No, sir, and the reason for that was the litigation that is underway, and the high probability that he will be called on to testify at some point during that litigation.

What we were trying to do, Congressman Valentine, is be as responsive to you and the other members as we could, without causing problems for the State of North Carolina, or for the Government, in the litigation that is already underway.

Mr. VALENTINE. How long, Mr. Dawson, has this project been in the works, so to speak? Would it be fair to say longer than 2 years?

Mr. DAWSON. I am sure the project has been. The application, I believe was formally filed back last summer.

Mr. VALENTINE. Were you not requested by North Carolina authorities, and others, to make an environmental impact statement over 18 months ago?

Mr. DAWSON. I am not sure of that, Mr. Congressman. I know that there were more recent requests for an EIS, but——

Mr. VALENTINE. And the requests, I know, have been made formally for over the past 13 months, and you say that some say that this environmental impact statement could be made within maybe 6 months?

Mr. DAWSON. That is, I think, the minimum time, yes, sir.

Mr. VALENTINE. Mr. Dawson, how do you go about deciding that an environmental impact statement is not necessary? What process do you enter into, what information do you gather, do you bring unto yourself, before somebody decides that this project that involves all this water, and moving the water over 100 miles, from one area to another, that it is not necessary?

Mr. DAWSON. I am going to defer in a moment to General Edgar, who has been a District Engineer, and who has conducted this kind of thing, and to Mr. Rees, who has been out in the field as well.

But let me just say generally, and not geared to this particular action, but generally the District Engineer is charged with looking at all of the impacts that are foreseeable, reasonably foreseeable, and quantifying those, and trying to come to a decision on whether the additional time and money, because these EIS's are very expensive things, both in terms of time as well as in money, whether that is warranted under the circumstances.

Maybe General Edgar could expand on that for you, sir.

General EDGAR. Well Mr. Congressman, there is a prescribed set of procedures in our regulations which I can provide for the record, that will go into greater detail, but it is a methodology in which the decisionmaker looks at the whole range of public interest concerns, the environment, the cost, this sort of thing. He makes a judgment given the facts that he has gathered through not only a search of the literature, but through the process of public hearings, talking to Government officials, and that kind of thing. He makes a judgment whether the answers to the questions that have been raised are sufficient for him to make a decision on whether or not there is sufficient impact that would require further study in the form of an EIS, which is more detailed than an environmental assessment, prior to his making the decision on the permit in question.

[The following was received for the record from General Edgar:]

RESPONSE FROM GENERAL EDGAR

As supplemental information to testimony, I have attached an excerpt to our NEPA implementation regular that applies to regulatory functions.

[Excerpt from Engineer Regulation 200-2-2 "Environmental Quality—Policy and Procedures for—Implementation NEPA"]

APPENDIX B

ENVIRONMENTAL OPERATING PROCEDURES AND DOCUMENTS FOR REGULATORY FUNCTIONS

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1. *Introduction.*—Because of the diverse geographic areas and types of activities covered by this regulation, it is likely that interpretive problems may arise from time to time. In keeping with Executive Order 12044 and the policy stated in the CEQ regulation implementing NEPA (40 CFR 1500.2), where interpretive problems arise and consideration of all other factors do not give a clear indication of a reason-

able interpretation, the interpretation (consistent with the spirit and intent of NEPA) which results in the least paperwork and delay will be used.

2. *General.*—This appendix provides guidance on the environmental requirements of 40 CFR 1500–1508 for Corps Civil Works field operating agencies with regulatory permits responsibilities. Where guidance in this appendix is not specific, the reader is referred to the basic regulation (ER 200–2–2). Where guidance is not specific in both this appendix and in the basic regulation, the reader is referred to 40 CFR 1500–1508.

3. *Development of information and data.*—The district engineer (division engineer in the case of New England and Pacific Ocean divisions) may require the applicant to furnish appropriate information that the district engineer considers necessary to allow preparation of an EA or EIS. This information shall include appropriate data necessary to properly evaluate reasonable alternatives to the applicant's proposal and to fully describe all such reasonable alternatives in the appropriate environmental document. The applicant should be advised that there is no assurance that favorable action will ultimately be taken on the application. In such situations where relevant information is missing or incomplete and the costs of obtaining it are exorbitant or the means to obtain it are not known, the district engineer should include a "worst-case" analysis (see 40 CFR 1502.22) in the appropriate environmental document if the district engineer believes the applicant's proposal may be approved. The district engineer may require the applicant to furnish any additional information necessary to properly assess the impacts of the applicant's proposed project and to evaluate alternatives under paragraph 11b(5) of this appendix. The district engineer shall assure the conduct of an independent evaluation and shall be responsible for the accuracy of the information submitted by the applicant.

4. *Elimination of duplication with State and local procedures.*—See paragraph 20 basic regulation.

5. *Informing the public.*—Several paragraphs of this appendix (paragraphs 7, 8, 10, 12, and 18) and 33 CFR 325 provide information regarding district engineers making available to the public certain environmental documents in accordance with 40 CFR 1506.6. The district engineer may, if resources are available, go beyond this regulation and inform the public of various other environmental and decision processes that have occurred.

6. *Pre-application consultation for major applications.*—In accordance with 40 CFR 1501.2(d) and the guidance in 33 CFR 325, the district engineer shall establish local procedures and policies including an appropriate publicity program to advise potential permit applicants of the pre-application consultation process where future Corps permitting actions may be required at the earliest possible time, the district engineer (or designated staff) shall inform potential applicants of the required public interest review including the preparation of an environmental document and attendent reviews, and other actions including the scoping process, if appropriate.

7. *Categorical exclusions.*—In addition, each district engineer may develop a supplemental list of proposed categorical exclusions as defined in 40 CFR 1508.4 appropriate to that district; notify other Federal, state, and local agencies and the general public through separate public notice procedures with a minimum 90 day comment period; and, if deemed necessary, hold a public hearing. The district engineer shall then forward the list through the division engineer to DAEN-CWO-N. Following review for Corps-wide consistency, the list will be forwarded to CEQ for approval. A public notice shall be issued at the conclusion of these procedures announcing the final list. This list may be revised from time to time using these public notice procedures. After adoption of categorical exclusion categories, public notices on site specific applications falling within such categories shall state that the application is considered to be a categorical exclusion so that commenting agencies and the public will have the opportunity to demonstrate that extraordinary circumstances exist on a particular application, thus requiring the preparation of an EA.

8. *EA/FONSI Document.* (See 40 CFR 1508.9 and 1508.13 for definitions).

a. *Environmental assessment (EA).*—The district engineer shall prepare an EA as soon as practicable after all relevant information has been made available to the district engineer (i.e., after the comment period for the public notice announcing receipt of the permit application has expired) and prior to preparation of the Findings of Fact (FOF). The EA shall include a discussion of reasonable alternatives. However, when the EA confirms that the impact of the applicant's proposal is not significant, there are no "unresolved conflicts concerning alternative uses of available resource . . ." (Section 102(2)(E) of NEPA), and the proposed action is a water dependent activity, the EA need not include a discussion on alternatives to the proposal. In all other cases the EA must address all the alternatives that go before the ultimate decision maker. This discussion will include suggested means by which the environ-

ment might be protected and by which adverse impacts could be reduced by conditioning of the permit. The EA shall be a brief document (should not normally exceed 15 pages) primarily focusing on whether or not the entire project subject to the permit requirement could have significant effects on the environment but shall not be used to justify a decision. (For example, where a utility company is applying for a permit to construct an outfall pipe from a proposed power plant, the EA must assess the direct and indirect environmental effects and alternatives of the entire plant.) The EA shall conclude with a FONSI (See 40 CFR 1508.13) or a determination that an EIS is required.

b. *Responsibilities in preparing EA.*—If information for an EA is undertaken by an outside consultant or prepared by the applicant, the district engineer is responsible for independent verification and use of the data, evaluation of the environmental issues, and for the scope and content of the EA. Preparation of an EA shall be based on considerations discussed in 40 CFR 1501, 1506 and 1508 and the instruction constained in paragraph 9 of the basic regulation.

c. *FONSI.*—If, the district engineer determines that a permit proposal's impact is not significant, the district engineer shall include a FONSI (See 40 CFR 1508.13) at the end of the EA. The combined document (i.e., both the EA and the FONSI) shall be dated, signed, and placed in the permit record. Where the district engineer has delegated authority to sign permits on his behalf, he may similarly delegate the signing of the EA/FONSI document. The FONSI will be based on information contained in the EA and other pertinent data obtained from cooperating Federal agencies having jurisdiction by law or special expertise, the interested public, the applicant, and Corp's expertise.

9. *Findings of fact (FOF).*—In accordance with 33 CFR 325, the District Engineer shall prepare as a separate document a FOF for every permit application not requiring an EIS. The FOF may reference the EA to avoid duplication.

10. *Environmental impact statement—General.*

a. *Determination of lead and cooperating agencies.*—When the district engineer concludes that the applicant's proposed activity may significantly affect the quality of the human environment and the district engineer believes that a permit may be warranted, the district engineer will first determine whether any other Federal agencies are involved. The district will contact any such other Federal agencies to determine their respective role(s) in the overall Federal action, i.e., that of lead agency, joint lead agency, or cooperating agency.

b. *Corps as lead agency.*—When the Corps is lead agency, it will be responsible for funding the entire EIS except for those portions which come under the jurisdiction of other Federal agencies. Staff support from other Federal agencies beyond the immediate jurisdiction of those agencies may be cost reimbursed by the Corps under written agreement.

c. *Corps as cooperating agency.*—If another agency is the lead agency as set forth by the CEQ regulations (40 CFR 1501.5 and 1501.6(a) and 1508.16), the district engineer will coordinate with that agency as a cooperating agency under 40 CFR 1501.6(b) and 1508.5 to insure that agency's resulting EIS may be adopted by the Corps for purposes of exercising its permit authority. As a cooperating agency the Corps will be responsible to the lead agency for providing that environmental information which is directly related to the regulatory matter involved and which is required for the preparation of an EIS and any inherent funding involved. This in no way shall be construed as lessening the district engineer's ability to request the applicant to furnish appropriate information as discussed in paragraph 3 of this appendix.

When the Corps is a cooperating agency because of a regulatory permit action, the district engineer will, in accordance with 40 CFR 1501.6(b)(4), "make available staff support at the lead agency's request" to enhance the latter's interdisciplinary capability provided the request pertains to the Corps permit action covered by the EIS. Beyond this, Corps staff support will generally be made available to the lead agency to the extent practicable within its own responsibility and available resources. Any assistance to a lead agency beyond this will normally be by written agreement with the lead agency providing for a cost reimbursible basis for Corps resources expended. If the district engineer thinks a public hearing should be held and another agency is lead agency, the district engineer may request that the lead agency hold a joint public hearing and provide reasons why the joint hearing will be helpful. The district engineer should offer to take an active part in the hearing and insure coverage of Corps concerns.

d. *Additional information from applicant relating to EIS preparation.*—In cases where a Corps EIS is required, the district engineer may require the applicant to furnish appropriate additional information that the district engineer considers nec-

essary to allow preparation of the EIS. The district engineer shall assist the applicant by outlining the types of information required. Early draft submittals of data may be made by the applicant to the district engineer for advisory review by appropriate disciplines either within the district engineer's staff or other agencies. This procedure envisions Corps or agency mark-up and informal comment and return to the applicant with brief time schedules to avoid unnecessary delays in the preparation process. The single point of contact designated within the district staff to effectively coordinate the regulatory process (33 CFR 325) shall also coordinate this process.

e. *Scoping process.*—The district engineer shall include the applicant in the scoping process with a view that the scope of the material to be submitted by the applicant will be sufficient. The scoping process should develop the topical scope of the pending EIS and allow the applicant to be advised of the data and information required by the district engineer. The scoping process shall be conducted by the element within the district that is responsible for preparing the EIS, but shall in any case, involve and include the single district regulatory staff coordinator for the proposed regulatory (and NEPA) action.

f. *Contracting.*—The district engineer may prepare an EIS either with its own in-house staff or by choosing a contractor. In choosing a contractor who reports directly to the district engineer, the procedures of 40 CFR 1506.5(c) will be followed. Where the district engineer is aware of any conflict of interest concerning the outcome of the proposed permit action which the proposed contractor may have, the district engineer shall not select that contractor. Where the information base required for an EIS is prepared by a consultant employed by the appplicant with a view that the resulting information will meet the district engineer's request for additional information which may be used by the district engineer in preparing an EIS, the district engineer will i) advise the applicant and/or his consultant of the Corps' information requirements, and ii) meet with the application and/or his consultant from time to time and provide him with the district engineer's views regarding adequacy of the data that is being developed (including now such data will be viewed in light of any possible conflict of interest which the consultant may have). The applicant and/or his consultant may either accept or reject the district engineer's guidance. However, the district engineer may require the applicant to resubmit any previously submitted data which the district engineer considers inadequate or inaccurate. The district engineer must specify the portion of information which is in contention. In all cases, the district engineer shall ensure the conduct of an independent evaluation of the information submitted and shall be responsible for its accuracy. This shall be documented in the record. Both the names of the principal preparers and those responsible for the independent evaluation shall be included in the EIS (see 40 CFR 1506.5(a)).

g. *Change in EIS determination.*—If the district engineer has previously published a notice of intent to prepare an EIS, or has already prepared and distributed a Draft EIS, the district engineer may at any time determine an EIS is no longer required due to (1) reevaluation of the original determination (2) reduced scope of the proposals, (3) receipt of additional information, or (4) sufficient evidence in the record to support denial of the proposal. If the EIS process is curtailed, the district engineer shall notify in writing the Office, Chief of Engineers, the appropriate Corps division office, the appropriate EPA Regional Administrator, the Office of Environmental Review of the Environmental Protection Agency, Washington, DC, and the public of his determination.

h. *Permit Denial Anticipated.*—The EIS process may follow through the completion of the final EIS stage even though denial of the application is anticipated if the record is not sufficient to support denial without completion of the final EIS process or if, in the district engineer's opinion, the public interest would be better served if the EIS process were completed. However, if denial is anticipated, the district engineer may informally notify the applicant that, although a final decision has not been made, the district engineer anticipates denial of the permit with the view that this applicant may wish to modify his proposal. If the case will be elevated to higher authority for decision, any EIS process must be completed prior to any such elevation. In this instance the district engineer should not limit the alternatives from which higher authority must choose. The district engineer shall forward to higher authority his views on comments received on the final EIS or final supplement to the final EIS.

i. *Time Limits.*—If, in addition to time requirements the district engineer might otherwise set, the Corps is asked by an applicant to set time limits for the various stages in the NEPA process under 40 CFR 1501.8, the district engineer shall set time limits in accordance with the guidelines presented in 40 CFR 1501.8. These

time limits shall be set in the best judgment of the district engineer based on past experience. Because problems beyond the control of the district engineer occasionally arise, any time limits set cannot be considered absolutely binding. When the Corps is a cooperating agency in a permit related action, the district engineer will make every reasonable effort to adhere to the time limts imposed by the lead agency.

j. *Definition of Corps Action.*—For regulatiory permits, the Corps action is issuance of a permit or issuance of a permit with conditions. For regulatory permits, denial of a permit application is considered "no action" on the part of the Corps.

11. *Organization and Contest of Draft EIS's.*

a. *General.* This section gives detailed information for preparing Draft EIS for regulatory permit applications that significantly affect the quality of the human environment. When the Corps is the only lead agency, this Draft EIS format and these procedures will be followed. When the Corps is one of the joint lead agencies, the joint lead agencies will mutually decide which agency's format and procedures will be followed. When the Corps is a cooperating agency, the district engineer will ensure that the Corps' information requirements are contained in the lead agency's Draft EIS. In either case, the EIS should assess the direct and indirect environmental effects and alternatives on the entire project including the portion directly subject to the permit requirement.

b. *Format.*

(1) *Cover Sheet.*

(a) Ref. 40 CFR 1502.11

(b) The "person at the agency who can supply further information" (40 CFR 1502.11(c)) is the regulatory action officer handling that permit action.

(c) The cover sheet shall identify the EIS as a Corps permit action and state the authorities (Sections 9, 10, 404, 103, etc.) under which the Corps is exerting its jurisdiction.

(2) *Summary.* In addition to the requirements of 40 CFR 1502.12, this section shall identify the proposed action as a Corps permit action stating the authorities (Sections 9, 10, 404, 103, etc.) under which the Corps is exerting its jurisdiction; it shall also summarize the purpose and need for the proposed action as described in paragraph 11(b)(4) below, and it shall briefly state the beneficial/adverse impacts of the proposed action.

(3) *Table of Contents.*

(4) *Purpose of and Need for the Proposal.* This section shall briefly recognize that every application has both an applicant's purpose and need and a public purpose and need. These may be the same when the applicant is a governmental body or agency. In most instances when an EIS is required and the applicant is not a governmental body or agency, the applicant is a member of the private sector engaged in providing a good or service for profit. At the same time, the applicant is requesting a permit to perform work which, if approved, is considered in the public interest (i.e., provides a public benefit). This public benefit shall be stated in as broad, generic terms as possible. For instance, the need for a water intake structure requiring a Corps permit as part of a fossil fuel power plant shall be stated as the need for energy and not be limited to the need for cooling water. In a similar way, the need for housing near canals or near marinas, etc., shall be expressed as the need for shelter and not as the need for recreation near water.

(5) *Alternatives.*

(a) Ref. 40 CFR 1502.14

(b) *Alternatives to be considered.* The EIS shall document a reasonable number and range of alternatives which would satisfy the purpose and need (as described in paragraph 11(b)(4) above) for which the applicant has submitted his proposal. The EIS (or EIS supplement) must address all the practicable alternatives that go before the ultimate decision maker (see 40 CFR 1505.1(e)). If the decision maker's proposed action on a permit application was not included as one of the alternatives in the final EIS and it differs substantively from those alternatives which were discussed, a draft and final supplemental to the final EIS as discussed in paragraph 16 of this appendix, must be prepared and circulated. However, new alternatives not previously discussed in a draft EIS may be included in the final EIS if they are variants of alternatives described in the draft EIS. The alternative section shall discuss the environmental impacts of the applicant's proposal and alternatives in comparative form. A chart is highly recommended as a means of providing easy, side by side, analysis of the impact of the proposal and its alternatives. Only those features and impacts that are significant and comparable shall be compared side by side. In depth evaluation will normally be limited to those reasonable alternatives which are both practical and:

(i) Within the capability of the applicant and within the jurisdiction of the Corps of Engineers. (These alternatives may encompass the Corps alternative to issue the permit as requested or to issue with mitigating conditions. It may also encompass the alternative to deny the permit with a view toward accomplishing the objective of the proposal by the applicant (or by any other party) by some other means or at some other site still within Corps jurisdiction.)

(ii) Within the capabilitiy of the applicant but outside the jurisdiction of the Corps of Engineers. (This alternative may include denial of the permit with a view toward accomplishing the objective of the proposal by the applicant (or any other party) outside of Corps jurisdiction.)

(iii) Reasonably foreseeable, beyond the capability of the applicant but within the jurisdiction of the Corps of Engineers. (This alternative may include the do-nothing or deny alternative, with a view toward the satisfaction of the public and/or private need by some other entity beyond the control of the applicant but within the jurisdiction of the Corps of Engineers).

(iv) Reasonably foreseeable, although beyond both the capability of the applicant and outside the jurisidiction of the Corps of Engineers. (This alternative may include the do-nothing or deny alternative, with a view toward the satisfaction of the public and/or private need by some other entity beyond the control of the applicant and beyond the scope of the Corps of Engineers.)

The EIS should clearly identify alternatives discussed in detail by the above categories. While these alternatives are to be discussed in depth, the level of in-depth evaluation of each may vary dependent upon the ranking of the alternatives in order of the likelihood that they may be accomplished. For non-water dependent activities which may affect floodplain values, the district engineer shall include in his EA or EIS a discussion of the availability of practicable alternatives outside the floodplain to Executive Order 11988.

(c) 40 CFR 1502.23 states a cost-benefit analysis shall be incorporated into the EIS when such an analysis is "relevent to the choice among alternatives . . . being considered for the proposed action." For regulatory permits, cost-benefit ratios need not be prepared on proposed actions as they relate to the efficiency of the proposal or the efficiency of the enterprise in the private sector. However, baseline economic data and its interpretation is appropriately included in an EIS when the data shows a measurable impact on the public (e.g. the price variation of energy when produced by a coal-fired generating plant versus nuclear plant or hydropower).

(d) *Disclosure of Preferred Alternatives.* For regulatory permit actions, the Corps takes an impartial position whether to issue or deny a particular application until the public interest review is complete. At no time is the Corps a proponent of any action. It simply determines whether or not certain actions proposed by applicants are in the public interest and under what circumstances such proposals, if modified, would be in the public interest. The Corps' actual decision that is made by the final decision maker will be stated in the Record of Decision. This does not negate the requirement under 40 CFR 1505.2(b) for the district engineer to objectively state the "environmentally preferred alternative."

(e) *Mitigation.* Guidance on mitigative measures which may be considered when evaluating permit applications is given in 33 CFR 325.4

(6) *Affected Environment.* Ref. 40 CFR 1502.14

(7) *Environmental Consequences.*

(a) Ref. 40 CFR 1502.16

(b) Ref. to 33 CFR 325 for definitions of primary effects, secondary effects, and other impacts.

(c) Except for Federal projects meeting the requirements of Section 404(r) of the Clean Water Act, the Section 404(b)(1) analysis under the Clearn Water Act may, but need not necessarily, be included in the EIS at the discretion of the district engineer. The information required by the 404(b)(1) guidelines, when included, will be integrated into the text of the EIS.

(8) *List of Preparers.* Ref. 40 CFR 1502.17

(9) *Public Involvement.*

(a) References: 40 CFR 1502.9(b), 1502.10(i), 1503.1, 1503.4, 1506.6, and 1506.9.

(b) This section shall briefly describe the public's involvement in the EIS process. It shall (i) briefly state the means used to involve the public including the scoping process, any public hearings held, etc., (ii) briefly state the Federal, State, and local agencies, organizations, and individuals (in this order) to whom copies of the statement have been sent, (iii) if a final EIS include copies of the public's comments on the draft EIS and the Corps responses to those comments. This portion shall include any responsible opposing views as well as the Corps responses to those issues raised. See paragraph 19c, "Comments Received on the Draft EIS" of basic regulation.

(10) *Appendixes.* The appendix portion of the EIS should contain background and supporting data and studies while the text of the EIS should contain data stating baseline information and anticipated impacts of the proposal. One guideline to be used in this regard is to place the data in the EIS text itself when to otherwise would cause the reader to refer frequently to the appendix in order to understand the EIS text. Any remaining information not able to be incorporated by reference in accordance with 40 CFR 1502.21 should be placed in the appendix. Placing as much data, studies, etc., into the draft EIS appendixes, within the above guidance, has the additional advantage that such information need only be referenced in the final EIS, not additionally reproduced in the final EIS.

11. *Index.* The index of an EIS is to be designed to provide for easy reference to items discussed in the main text of the EIS. These items are to be listed in the index in alphabetical order and page(s) and paragraph number(s) given for each item. The index shall be placed at the very end of the EIS document.

12. *Notice of Intent.* The district engineer shall follow the guidance in ER 200-2-1 in preparing a notice of intent to prepare a Draft EIS for publication in the Federal Register. A notice of intent announcing a proposed Draft EIS for regulatory permit actions shall identify the action as a regulatory permit action in the title of the notice as listed in the Table of Contents to the Federal Register.

13. *Public Hearing.* If a public hearing is to be held pursuant to 33 CFR 327, and a draft EIS is to be considered at the public hearing, the district engineer will make the draft EIS available to the public at least 15 days in advance of the hearing (unless the purpose of the hearing is to provide information for the draft EIS). If a hearing request is received from another agency having jurisdiction as provided in 40 CFR 1506.6(c)(2), the district engineer shall initiate coordination for a joint hearing with that agency whenever appropriate. Unless the district engineer concurs that such a hearing is required under 33 CFR 327 he will not independently conduct a hearing.

14. *Organization and Content of Final EIS.* The organization and content of the final EIS shall follow the guidance in paragraph 11a(2) of the basic regulation. The EIS is not a decision document and the filing of a final EIS is not to be considered a decision on a permit application. Nor is an EIS to be prepared to justify a decision. An EIS is prepared to provide information on which a decision is based. Filing the final EIS is merely one of the administrative steps which must be taken to comply with the procedural provisions of NEPA in accordance with CEQ regulations when processing a permit application which may significantly affect the quality of the human environment. Permit issuance cannot occur until 30 days after the final EIS has been noticed in the Federal Register by EPA and the Record of Decision signed.

15. *Comments Received on the Final EIS.* For permit cases to be decided at the district level, the district engineer will carefully review and consider all comments received on the final EIS before making a final decision on the applicant's proposal but need not reply to those parties providing comments on the final EIS. For permit cases elevated to higher authority for a decision, the district engineer shall forward the incoming letters together with appropriate responses to the substantive comments to higher authority along with the case. In the case of a letter recommending a referral under 40 CFR 1504, the district engineer will follow the guidance in paragraph 23 of this appendix.

16. *EIS Supplement*

a. See 40 CFR 1502.9(c)(1) and paragraph 11b of basic regulation when a supplement to either a draft or final EIS is required.

b. A supplement to a draft EIS will require a 45-day minimum comment period. Note that there is no draft supplement or final supplement to a draft EIS, only a supplement to a draft EIS. The final EIS will encompass all information presented in both the draft EIS and the supplement to the draft EIS.

c. A supplement to a final EIS will be prepared as both a draft supplement to the final EIS and a final supplement to the final EIS. The 45-day 30-day minimum comment periods, respectively, are required. No final action shall be taken on the applicant's proposal sooner than 90-days after the draft supplement has been filed with EPA. See 40 CFR 1502.9(c)(4).

d. Supplements will be prepared in the EIS format described in paragraph 11 of this appendix. References to the draft or final EIS being supplemented should be used extensively to eliminate repetitive discussion. The supplements should primarily be concerned with and should discuss the significance of impacts resulting from the changes, new information, or circumstances relevant to the environmental or other concerns which impact or have a bearing on the applicant's proposal.

17. *Supplemental Information and other Reports.* Paragraphs 11(d) and (e) of the main text provide background information and guidance for supplemental informa-

tion reports. Supplemental information reports are not required by 40 CFR 1500. Therefore, regulatory permit field elements need not prepare them. However, should a district engineer feel the public interest would be better served by distributing such supplemental information reports to the public, he may do so at his discretion. Unless specifically requested none are to be forwarded to DAEN-CWO-N.

18. *Public Notice Announcing Availability of Draft, Final EIS and EIS Supplements.* In order to notify the interested public of its opportunity to comment on draft and final EIS and any EIS supplement, the district engineer shall issue a public notice as soon as practicable after the filing notation has been published in the Federal Register. This notice should be furnished to all parties receiving any earlier notices, all parties receiving any previous copies of the EIS, and all others who have expressed an interest in the application as well as those parties listed in 40 CFR 1506.6 as appropriate. When the Corps is a cooperating agency, the district engineer may, but is not required, to distribute public notices in accordance with this paragraph. The public notice should include:

a. a brief summary of the application (applicant work, date(s) of other notice(s), dates of any previous EIS (draft, supplement to the draft, final, draft supplement to the final), date(s) of hearing(s) if held;

b. Opportunity to comment to the district engineer on the EIS or EIS supplement until the deadline date projected by the comment period (required by 40 CFR 1506.10 and paragraph 16 of Appendix B) which began with notation in the Federal Register that the EIS or EIS supplement had been filed;

c. A statement that the comments received on the EIS or EIS supplement will be evaluated and considered in arriving at a final decision on the application; and

d. Information on how interested parties can obtain or have access to the EIS or EIS supplement.

19. *Filing Requirements.* District engineers will file draft and final EIS and any EIS supplements directly with EPA after appropriate review by the respective division office and the incorporation in the EIS of division's comments. Five (5) copies shall be sent to Director, Office of Federal Activities (A-104), Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. Draft and final EIS and any appropriate supplements shall be mailed (with the required number of copies) to those agencies, groups, and individuals known to have an interest or who have requested they receive such copies for the proposal in question and in accordance with 40 CFR 1502.19, 1503.1, and 1506.6. At the same time they are mailed to EPA for filing, one copy of each draft and final EIS, and EIS supplements when appropriate, shall be forwarded to HQDA (DAEN-CWO-N)WASH DC 20314. The transmittal letter to OCE shall include the status of the permit application, a list of the objectors, the issues involved, whether the case is in litigation, and a preliminary determination whether the permit decision will be made at the district level. 40 CFR 1506.10 describes the timing of an agency action when a EIS is involved.

20. *Expedited Filing.* 40 CFR 1506.10 provides information on allowable time reductions and time extensions associated with the EIS process. When the applicant's proposed action must be undertaken within critical time restraints or because of compelling reasons of national policy, a shortened review period may be recommended. In such cases, the district engineer will provide the necessary information and facts to HQDA (DAEN-CWZ-P) WASH DC 20314 (with copy to (DAEN-CWO-N) for consultation with EPA for a reduction in the prescribed review periods.

21. *Record of Decision.* In those cases involving an EIS, the Findings of Fact will be called the Record of Decision and shall incorporate the requirements of 40 CFR 1505.2. The Record of Decision is not to be included when filing a final EIS. The Record of Decision is not to be prepared nor signed until 30 days after the final EIS has been noticed in the Federal Register by EPA. To avoid duplication, the Record of Decision may reference the EIS.

22. *Predecision Referrals by Other Agencies for Regulatory Permits.* If the district engineer receives comments on a draft EIS from another Federal agency advising of a potential referral to CEQ under 40 CFR 1504, the district engineer shall, to the extent practicable, provide the necessary information and/or attempt to resolve the differences prior to filing the final EIS on the proposed action. In all cases the final decision-maker, as set forth in 33 CFR 325.8, will wait the 30 day comment period following filing of the final EIS before making his final decision. If this decision is contrary to the position of the agency which has indicated an intent to refer the matter to CEQ, the decision-maker will notify the agency and CEQ of his proposed decision. The referring agency will then have 25 calendar days to actually refer the case to CEQ under 40 CFR 1504 if it so chooses. If a referral is made, the decision-maker will transmit the referral to (DAEN-CWZ-P) and (DAEN-CWO-N) for further guidance.

23. *Review of Other Agencies' EIS.* If the district engineer determines after review of another agency's draft EIS that the proposed action (which must involve a Corps permit action) is inadequate with respect to the Corps permit action, the district engineer shall attempt to resolve the differences concerning the Corps permit action prior to the filing of the final EIS by the other agency. If these attempts are unsuccessful and, upon review of another agency's final EIS the district engineer finds that final EIS is inadequate with respect to the Corps permit action, the district engineer shall supplement the final EIS with either an EA or a draft and final supplement to that agency's final EIS.

24. *Monitoring.* Monitoring compliance with permit requirements shall be carried out in accordance with 40 CFR 1505.3 and as deemed necessary under 33 CFR 325. For those permit actions for which an EIS has been prepared and the Corps is the lead agency, the district engineer shall, upon written request, make available to the public the results of relevant monitoring. Appropriate mitigation and other conditions shall be a part of the permit as specified in 33 CFR 325. For those permit actions for which an EIS has been prepared and the Corps is the lead agency, the district engineer shall, upon written request, inform cooperating or commenting agencies on progress in carrying out mitigation measures which they have proposed and which the Corps adopted in making its permit decision.

Mr. VALENTINE. Let me ask you this, General, or Mr. Dawson. Did the corps make any study of projected agriculture uses of water for the lower Roanoke River over the next 50 years, or did the corps make a study about the projected industrial needs for water in the lower Cape Fear River over the next 50 years?

Mr. DAWSON. We just do not know, Mr. Congressman. We will supply that.

[The following was received for the record.]

RESPONSE FROM MR. DAWSON

The Corps is completing a Section 216 Study of John H. Kerr project. This study looks at changes in needs since Kerr was completed and at the necessity for changing storage allocations or the plan of operation to better satisfy present needs. No changes are being recommended. Should the need develop, consideration can and no doubt will be given to reallocating storage for agricultural and industrial use in the future. If agricultural and industrial needs develop that are beyond the capacity of the six existing reservoirs, there are still five reservoirs in the approved plan of development that could be built. The 10,200 ac-ft of storage allocated to water supply is such a small percentage of the useful storage in Kerr Lake that it would have practically no effect on the ability of the reservoir system to meet other needs which may develop.

Mr. VALENTINE. Can you tell us what studies the corps did make with respect to the long-range effects of this transfer of water in the Lower Cape Fear River Basin and what the results would be to that area for daily withdrawals of over 60 million gallons of water?

Mr. DAWSON. We will supply that for you, sir.

[The following was received for the record.]

RESPONSE FROM MR. DAWSON

Concerns over the immediate and future effects of the withdrawal were analyzed. The results of these analyses are found in Sections 4. d,e,f,n, and r of the Final Environmental Assessement (attached).

FINAL ENVIRONMENTAL ASSESSMENT OF A PERMIT APPLICATION FOR CONSTRUCTION OF A WATER SUPPLY PIPELINE AND APPURTENANT STRUCTURES IN LAKE GASTON AND CROSSING SEVERAL RIVERS

1. *Name of applicant.*—City of Virginia Beach, Municipal Center, Virginia Beach, Virginia 23456.

2. *Description of the proposed work.*—The City of Virginia Beach proposes to construct a water intake structure in Pea Hill Creek and a 60-inch inside diameter concrete pipeline approximately 84.5 miles from Pea Hill Creek to connect with a City of Norfolk water pipeline located near the Red Top area of Suffolk. From Pea Hill

Creek, the pipeline would proceed in basically an easterly direction to a VEPCO power line right-of-way located near the Greensville County line. The pipeline would then follow the VEPCO right-of-way, northeast to a Norfolk and Southern rail line near the town of Purdy. The pipeline would then follow active or abandoned rail lines eastward to a point near the Town of Walters, where the pipeline would then follow a City of Norfolk aqueduct right-of-way to Red Top. At Red Top the Virginia Beach pipeline would connect with a Norfolk pipeline.

The intake structure will consist of two arrays of wedge-wire screens placed in the lake in water approximately 29 feet deep at normal pool elevation (200 feet, msl). The top of the screened intakes will be no closer than 15 feet to the surface. The intake velocity at the screens will be ½ foot per second. The intake structures will be connected to the shore by reinforced concrete pipes buried beneath the lake bottom in trenches. The two trenches will be approximately 200 and 300 feet long and cut 6 feet 9 inches into the bottom. After the pipelines are bedded, the trenches will be backfilled with stone riprap to a depth six inches above the preexisting bottom elevation. The trenches will be mechanically dredged and the dredged material, approximately 1100 cubic yards, will be placed behind staked straw bales in a nearby upland area.

Additionally, in Pea Hill Creek, the applicant proposes to construct an open-pile timber L-head pier and boat house would extend approximately 40 feet channelward of the shoreline. Adjacent to the pier a 15-foot-wide reinforced concrete boat ramp will be constructed on a gravel bed. Approximately 21 cubic yards of material will be excavated for the gravel bedding and will be placed in the previously mentioned disposal area. The pier and boat ramp will be used for maintenance of the intake structure. As mitigation for potential adverse impacts on larval fishes (primarily walleye) which may be caused by operation of the intake, the applicant also proposes to create a ¼–½ acre spawning area of graded rock in a shallow water area of Pea Hill Creek. Pipeline construction between Pea Hill Creek and Suffolk will involve more than 26 stream and river crossings. Between Purdy and Suffolk all stream crossings will be made within an existing (but abandoned) railroad grade or on existing (but abandoned) railroad bridge pilings. Between Purdy and Pea Hill Creek, all stream crossings will be buried with the exception of the Meherrin River crossing, which will be an aerial crossing lifted on pilings. After construction, all excavations or fills in wetland areas will be regraded to preexisting surface elevations.

To support the proposed water withdrawal from Lake Gaston, the applicant has requested that the Wilmington District, Army Corps of Engineers provide storage in John H. Kerr Reservoir (hereinafter referred to as Kerr). This would require a reallocation of storage in Kerr from hydropower to water supply.

3. *Purpose and need.*—The purpose of this proposal is to provide a maximum of 60 million gallons per day (MGD) of water of acceptable quality to the populations of (primarily) Virginia Beach and (secondarily) Chesapeake, Isle of Wight and Franklin. Based on projected population growth, Virginia Beach (hereafter referred to as "the City") is expected to reach a demand of 48 MGD by the year 2030. The City does not presently own a water system, normally buying all of its water from the Norfolk system. The City has constructed and turned over to Suffolk, Isle of Wight County and Southhampton County five wells which it has the right to use during a declared emergency for a fee paid to those localities. Because of their inadequate yield, and reasons which will be discussed elsewhere in this document, the City does not wish to rely on these wells; wanting instead a more autonomous source of water to meet its needs. Chesapeake currently obtain its water from the Northwest River. Through conditions imposed by Chesapeake's Department of the Army permit, its withdrawal from the Northwest River is limited to 10 MGD maximum and is subject to being completely stopped whenever downstream salinities exceed certain maximum values. On two separate occasions in October 1983, salinity values exceeded the permit limits, which would have necessitated stopping the withdrawal completely had not salinity values dropped the next days. Chesapeake would then have had to obtain its water from Norfolk or Portsmouth. Chesapeake's projected water demand for 2030 is approximately 18 MGD. Chesapeake has requested an allotment of 10 MGD from Virginia Beach to help insure its needs. Isle of Wight and Franklin presently obtain most of their water from wells. Their requests of 1 MGD each will help meet their future demand and diversify their sources.

4. *Probable effects of the proposed work on*

a. *Navigation:* No significant impacts are anticipated. In Kerr the only impact of the project on navigation would be from lake level drawdown. As explained in Section 4c, this drawdown would depend upon the severity of the drought event. In no case should the drawdown due to the project add more than 0.2 feet to the 7.0-foot

drawdown caused by the drought itself and in years of normal or near-normal rainfall there would be no additional drawdown whatsoever. The worst-case 0.2-foot incremental drawdown should have no noticeable effect on navigation when compared to impacts caused by the first seven feet of drawdown due to drought, and considering its expected frequency of only once in more than 100 years. The 0.2-foot, 100-year vertical increment of drawdown should have a roughly proportional effect on horizontal shoreline exposure; i.e., roughly a 2.8 percent increase over the "no-project" worst case.

In Lake Gaston, there would be no navigational impacts due to drawdown because the proposed project would not affect those water levels. The intake structures will be beneath 15 feet of water and will be marked with buoys, so it would be virtually impossible for a boat to actually strike the intake structure and the chances of hitting it with an anchor would be remote. During operation of the intakes, no vortex or whirlpool will be created on the surface. When the screens are backwashed with bursts of air momentary turbulence will be created on the surface around the buoys as the bubbles burst. Downstream of Lake Gaston navigation should not be noticeably affected in Roanoke Rapids Lake or the Roanoke River because of the project's insignificant effect on total river flow and river levels (see Sec. 4c). Existing minimum flows and minimum river levels will not be affected.

Navigation by boat is not possible in most of the streams crossed by the pipeline because of their small sizes. All crossings of streams which could reasonably support boat traffic will be made on bridge piles. With the exception of the Meherrin River crossing, these bridge crossings will be made on railroad bridges pilings which were left in place when the tracks were removed. The crossing of the Meherrin will be made on new pilings. In all cases the elevations of the aerial pipeline crossings will be at or above the elevations of other bridges on those waterways. Aside from temporary obstructions during construction there should be no navigational impacts in these streams.

b. *Flooding and Flood Plain Management:* No significant effects are anticipated. During and after a flood, the project would have a very slightly positive effect on Gaston and downriver by siphoning off up to 60 MGD of the floodwaters. Most of the pipeline will be buried and the aerial crossings will be made at an elevation such that they should neither casue nor incur flood damage. The project would not create any permanently occupied structures nor would it cause anyone to move into a flood hazard area. As explained later, the project is not expected to induce growth; only to serve the growth that is projected to occur. The proposal does not conflict with the Executive Order on Floodplain Management (EO 11988).

c. *Hydrology:* No significant effects are anticipated. The project would occasionally affect water levels in Kerr and flows below Lake Gaston, but not in Lake Gaston itself. The applicant has estimated that for a worst-case situation in Kerr, the proposed intake would result in a drawdown of 1.2 feet (1). The Wilmington District has projected a worst-case drawdown due to the intake of 0.2 feet (2). The differences between the predictions are due in part to the fact that the applicant did not factor in the effects of the upstream Smith Mountain Lake and in part because of different assumptions as to how releases would be regulated. The 0.2 feet figure is considered a more accurate estimate since Wilmington District directly controls the operation of Kerr. This drawdown would occur only during a period of record low streamflow and require power generation, a situation which is expected to occur less frequently than once every 100 years (3). During such a situation and without the City's project, water levels would be drawn down 7.0 feet below the 300-foot elevation (top of power pool). During such a situation with the City's project, water levels would be drawn down 7.2 feet. As a condition of their Federal Energy Regulatory Commission (FERC) license, VEPCO must release a certain minimum flow each month from the Roanoke Rapids Dam. These minium flows vary monthly from 2000 cfs (1291 MGD) during the spring and summer months down to 1000 cfs (645 MGD) from November through March. In practice VEPCO usually releases much more than the required minimums, since the average flow over the dam is 8153 cfs (5266 MGD). During the 1983 water year (October 1, 1982–September 30, 1983) VEPCO released more than the minimum flow every day, even during the summer months which experienced less than normal rainfall (4). The City's 10 MGD startup withdrawal is 0.2 percent of the average flow at Roanoke Rapids and the 60 MGD maximum withdrawal is 1.2 percent of the average flow. Worst case flows are represented by the FERC-mandated minimums and would not be affected by the City's project. During the 1983 water year there were 14 times when the flows were within 93 cfs (60 MGD) of the regulated minimums, so the City's project could hypothetically have caused 14 days of minimum regulated flows. These 14 days would have occurred during June–September, when the regulated minimum flow is 2000 cfs.

Water levels in Roanoke Rapids Lake are normally 129 feet above mean sea level, varying between 126.5 and 132.5 feet. VEPCO has indicated that they can accommodate the City's proposed withdrawal by controlling the releases from the Gaston and Roanoke Rapids Dams so as to keep both lakes within their existing ranges of fluctuations (5). Water levels in the Roanoke River below Roanoke Rapids Dam are determined by the flow in the river, with the level corresponding to 1000 cfs being the lowest. The greatest effect the City's proposal would have on downstream river levels would be to increase the number of days during which these low flows (and levels) occur.

The drainage area of the Pea Hill Creek portion of Lake Gaston is sufficient to produce an average flow of approximately 15 MGD (based on an assumed average of 1 cfs per square mile of drainage area). If water levels in Lake Gaston were static, this would mean that when the City began pumping at a rate of 10 MGD under average inflow conditions, flows would continue to go "downstream" or south. At some point in the future when the City's pumping exceeded 15 MGD, water would begin to flow north until by the year 2030, at the mouth of Pea Hill Creek, the average flow would be 45 MGD to the north. Because VEPCO raises and lowers the lake level between 199 and 201 feet (msl), the flow in Pea Hill Creek resembles a tide, sometimes flowing north and sometimes flowing south. By planimetering the surface area of Pea Hill Creek (from U.S.G.S. quadrangles), the approximate volume of VEPCO's two foot fluctuation can be calculated. The City's proposed maximum withdrawal of 60 MGD represents approximately 6 percent of the VEPCO flow. Since the VEPCO flow would be approximately 17 times greater than the flow due to the City's withdrawal, the City's withdrawal should not have any significant effect on flows in Pea Hill Creek.

From time to time Pea Hill Creek presently experiences stratification of its water into an oxygen-poor, colder hypolimnion overlain by an oxygen rich, warmer epilimnion. The City's intake would probably be within the hypolimnion at such times. It is unlikely that the minimal currents (0.5 fps) at the City's intakes would disrupt the thermocline, especially since the intake velocity drops quickly as the distance from the screen increases. Any such disruption would be expected to be very localized in area and might have either a positive or a negative impact on water quality, depending on local water chemistry at the time.

Because the pipeline will either be buried below existing grade or elevated overbridged crossings, stream flows should not be interrupted permanently. Temporary interruptions or other effects may occur while a particular water body is being crossed during construction.

d. *Water Quality:* No significant impacts are anticipated. Operation of the intake would have no direct effect on water quality in Kerr. Indirectly, in times of low flow (drought) the withdrawal will slightly affect residence time, i.e. the time it takes from when water enters Kerr until the time it leaves it. This effect is expected to be very slight (6) due to the proposed project's minimal impact on the volumes in Kerr.

In Lake Gaston, the City's intake would cause slightly more (approximately 6 percent) water from the main body of Lake Gaston to enter the lower reach of Pea Hill Creek. Lake Gaston water is slightly lower in quality than Pea Hill Creek water on average, although at any one time either water body may have higher or lower quality. Since the difference between the average quality of each is slight, the addition of 6 percent more Lake Gaston water to the lower reach of Pea Hill Creek should have an insignificant impact on Pea Hill Creek. From time to time the water in the main body of Lake Gaston becomes turbid from runoff higher up in the Roanoke River basin. The intake would slightly increase the degree to which this turbid water enters Peas Hill Creek. The suspended particles in this turbid water will slowly settle, but the lower reach of Pea Hill Creek is approximately 40 feet deep, so a 6 percent increase in this more turbid water which enters Pea Hill Creek should not cause any navigational problems due to shoaling.

Any downstream water quality effects which may occur would have to result from the project's effects on river flows. As discussed earlier, this is not expected to be noticeable. Whatever quantities of phosphates, nitrates, turbidity, etc. which are sucked into the City's intakes would represent a slight reduction in the total pollutant loadings in the lower Roanoke River. On average, the City's project would cause approximately 1 percent less water to be available for dilution of downstream pollutants.

Downstream industries and municipalities depend on river flows to dilute their pollutant discharges. These discharges are regulated through the National Pollutant Discharge Elimination System (NDPES) and the maximum discharges allowed are figured based on low flows during the month of October, when the dissolved oxygen in the water usually reaches its yearly low (7). VEPCO's FERC license for the Roa-

noke Rapids Dam requires that certain minimum flows and quantities of dissolved oxygen be released downstream at all times. These license requirements for flow and dissolved oxygen will not be affected by the City's proposed project.

Water quality in Albemarle Sound should not be significantly affected, as the City's proposed withdrawal represents only approximately 0.5 percent of the average freshwater inflow into the Sound. Salinity varies from as much as 5 parts per thousand (ppt) near the eastern end of the Sound to less than 1 ppt near the western end. A joint publication by the U.S. Geological Survey and the North Carolina Department of Natural Resources and Community Development states: ". . . it is not likely that any significant saltwater encroachment will occur in the future in the Roanoke estuary, even under extreme drought conditions, as long as the current flow regulation patterns are maintained" (8).

Some turbidity will be created in the streams which will be crossed by the pipeline during construction. Through the use of hay bales and other erosion control devices, this impact should be temporary and minor. Some turbidity will also be temporarily created in Pea Hill Creek during construction of the intake pipelines, the boat house and the boat ramp. This should also be temporary and of minor impact. The material dredged from the lake during construction will be placed in a bermed, upland disposal area until it dewaters and becomes vegetated.

An analysis of the effects of the discharges under Section 404 (b)(1) of the Clean Water Act is attached to this assessment as an appendix.

e. *Wetlands:* No significant effects are anticipated. The project would temporarily affect approximately 760,000 square feet of various wetland types at the water crossings of the pipeline. The impacts will result from ditching for the pipeline, stockpiling the excavated material, and equipment access ways. After construction at each crossing, all of these areas will be regraded to their preexisting wetland elevations. Herbaceous wetland plants should completely revegetate the areas within one or two growing seasons. Woody wetland plants will take longer to become reestablished and in some areas will have to be kept cut for maintenance access. Since the hydrologic regime should stay the same, this will probably result in a more or less permanent displacement of the affected wooded wetland areas by herbaceous wetland areas. This should not constitute a long-term adverse impact and may even improve the ecological value of the wooded wetland areas by creating habitat diversity. The project does not conflict with the Executive Order on Wetlands (EO 11990).

f. *Fish and Wildlife:* No significant impacts are anticipated. In Kerr, the occasional increased fluctuation of the water level could affect any spawning, nesting or forage areas which might become exposed. Since the incremental decrease in water level is so small (as discussed in Section 4 c) and infrequent compared with existing fluctuations and drawdowns, there should be no discernable impact due to the project. The City's proposal would not affect flood releases from Kerr. Any impacts on fish due to changes in residence time are expected to be slight because those changes would be slight.

In Lake Gaston, the principal impacts of the project on fish would be expected to occur in Pea Hill Creek. Some of the many fish species found in Pea Hill Creek are chain pickerel, channel catfish, crappie, several "sunfishes", largemouth bass, striped bass, and occasional white bass and walleye. Depending on screen opening size and intake velocities, intake structures can cause adverse impacts to fishes. The City's proposal to use wedge wire screens with 1 mm openings and a maximum intake velocity at the screen of 0.5 fps should eliminate any possibility of healthy adult fish being impinged on the screen. Most fish larvae spend their first several weeks in shallow areas and would not come near the intakes. Pelagic spawners, such as striped bass, whose eggs drift through the water, favor spawning streams with strong currents, unlike Pea Hill Creek. Once the larvae become juvenile fishes and move into deeper water, they would be too big to be sucked through the screens and strong enough swimmers to avoid the small intake current (9)(10). Walleye are an exception, however, because their larvae head for deep water soon after hatching. Even though the screen size and intake velocity are small enough not to pose much risk to walleye (10), it is a species which fisheries biologists in North Carolina have been assisting through stocking programs. The limited success of stocking has led some to believe that without more spawning areas for walleye in Lake Gaston, the stocking programs will have a difficult time reaching success. To mitigate possible adverse effects of their intake on walleye, the City proposes to create a ¼ to ½ acre spawning area for walleye in Pea Hill Creek. The bed would consist of graded rock on a stable base to prevent sinking. This method has been used elsewhere with some success (11).

Striped bass migrate up the Roanoke River every spring to spawn. Successful spawning requires higher-than-normal river flows to keep the eggs buoyant until

they hatch. For this purpose, the Corps stores extra water in the early spring, when it is available, to release beginning around April 26 and ending around June 15. This period of roughly 50 days is a "window" which should cover most annual spawning and hatching periods. Exact dates are determined by North Carolina fishery biologists. The water released by the Corps during this period results in a flow at Weldon, North Carolina of 6000 cfs, or a river stage elevation of 13. The City's intake would, under worst-case conditions, eliminate two days from the end of the 50-day augmented flows (1). This condition would be expected to occur four times in 100 years. In one year out of four, one day would be lost at the end of the 50-day augmented flow period. This worst-case condition assumes the maximum, 60 MGD withdrawal, which is not projected to be reached until the year 2030. A two percent loss in potential spawning time once every four years is not considered significant, nor is a four percent loss once every 25 years, in part because a number of variables other than river flow are though to influence striped bass spawning and survival (12). Anadromous striped bass populations have decreased over the last decade throughout the East Coast. A 1977 publication by the North Carolina State Museum of Natural History notes "Severe industrial pollution . . . at Roanoke Rapids imperils successful spawning . . . The local water will not support the fish's early developmental stages" (13)

Several other important recreational and commercial fish species utilize the lower Roanoke River for part or all of their life cycles (shad, herring, perch, largemouth bass, menhaden, etc). The City's project should have no effect on these species.

Most of the pipeline route traverses land which has previously been disturbed, and which continues to be disturbed periodically. Some additional temporary disturbance will occur during construction. Wildlife which inhabit the VEPCO and railroad rights-of-way can be assumed to be conditioned to periodic disruptions of their habitat. The area between Pea Hill Creek and the VEPCO right-of-way is less frequently disturbed, mostly by periodic lumbering. A permanently cleared strip through this area (approximately six miles long and 50-100 feet wide) will be created and maintained by the City. Since much of the wooded land has recently been clear-cut, only a relatively small amount of mature forest will have to be removed. It can generally be assumed that wildlife which require or prefer climax forest habitats (such as wild turkey) will be somewhat disadvantaged in favor of species which prefer or require herbaceous or shrub habitats.

The Red Cockaded Woodpecker, a bird listed as being "endangered" pursuant to the Endangered Species Act is occasionally found in forested areas in southeastern Virginia. It prefers mature forests with little undergrowth, particularly pine forests where several of the trees are infected with red heart disease. No known areas of such habitat will be affected by this project since practically the entire pipeline route is partially or entirely clear of mature trees. The U.S. Fish and Wildlife Service has not expressed any concerns regarding this project relative to the Endangered Species Act. The Carolina Darter *(Etheostoma collis)* is a small fish which has been collected in the upper reaches of Kerr reservoir. It has been listed as being of "special concern" by the North Carolina State Museum of Natural History (13) in other river basins of North Carolina, but not in the Roanoke. It is not listed as "threatened" or "endangered" under State or Federal law. In Kerr, it is apparently adapted to the existing water level fluctuations and should not be affected by this project.

It is conceivable that the City's cleared pipeline route could provide access for purposes of illegally poaching deer. Any such effect should be minor. The pipeline corridor will not be fenced and almost all of the pipeline will be buried, so wildlife migration patterns should not be affected.

g. *Erosion and Accretion:* No significant effects are anticipated. Provided standard sedimentation and erosion control practices are observed, any such impacts should be restricted to the construction phase of the project and should be very localized and minor.

h. *Food and Fiber Production:* No significant effects are anticipated. Construction across farm fields will be done so that the topsoil will be reserved and replaced on top of the backfill. The pipeline will be buried deeper than normal tillage levels (3 feet). For those farm fields which will be traversed during the planting, growing or harvesting season, the farmer would lose one year's worth of crop from that 50-100 foot-wide corridor. Some "prime and unique" farmland will be crossed, but, again, impacts will be temporary. Other than the occasional cutting of trees to widen existing clear ways, and cutting to create access points, the only possible effects on commercial timber will be in the six-mile stretch east of Pea Hill Creek. As mentioned earlier, much of these forested areas have recently been cut.

The North Carolina Department of Natural Resources and Community Development (14) has projected increases in farm irrigation water for the Roanoke River

basin and a portion of the Tar River basin to increase by the year 2030, citing both low and high projections. The amount of increase is between 19.4 and 56.4 MGD. It appears from the map used in the projection that approximately 40% of the area is in the Tar basin. If it can be assumed that 50% of the irrigation water comes from free-flowing rivers or streams (as opposed to ponds or groundwater), between 5.8 and 16.9 MGD in additional losses would occur from the Roanoke River. It is assumed that all irrigation will use state-of-the-art technology, so none of the irrigation water would reenter the river through runoff or percolation. When added to the City's proposed 60 MGD maximum, this total amounts to between 1.1% and 1.3% of the average flow at the mouth of the Roanoke River. Irrigation from ponds has a slight effect on downstream flows, depending on the size of the impoundment and the amount of water used, but it's effect on the above projection is probably largely offset by the assumption of state-of-the-art technology.

i. *Recreation:* No significant effects are anticipated in Kerr, Lake Gaston or Roanoke Rapids. Swimming, boating, fishing, sailing and water skiing should not be affected in Pea Hill Creek by the project except during construction. In Pea Hill Creek, buoys will be placed over the intake structures. These should not significantly affect recreational boating. The proposed walleye spawning area may increase the population of this game fish. During periodic backwashing of the intake screens (approximately once a week (15)) the water surface directly above the intakes will become turbulent for a few seconds as the air bubbles hit the surface. A boater unaware of this effect and in a canoe or small sailboat might capsize if he encounters this turbulence (16). One of the purposes of the buoys is to make boaters aware of the location of the periodic turbulence. Visually scanning the area from the shoreline before backwashing should make certain that no boaters would be affected.

j. *Cultural Values:* No significant effects are anticipated. No standing structures eligible for inclusion in the National Register of Historic Places will be affected by the project. The City, after consulting with the Virginia Research Center for Archaeology, is presently conducting a Phase I archaeological study along the pipeline route.

k. *Aesthetics:* No significant effects are anticipated. Visual aesthetic impact (disturbed and/or denuded earth, dust) should be limited to the construction phase of the project. Since the pipeline will be laid in sections, the impacts at any one place should last only a couple of months. Overhead water crossings along the railroad corridor will be on existing pilings and should present no significant aesthetic change from the pilings themselves or from the railroad bridges which once existed. The crossings of the Meherrin will involve construction of a new bridge. This segment of the Meherrin is listed on the Nationwide Rivers Inventory with the note that the "corridor and surrounding watersheds are essentially undeveloped." This 37 mile strech of the river is already crossed by more than 10 road and railroad bridges and at least two power lines, so the proposed crossing should not affect its designation in the Inventory.

During construction, noise and dust will be temporary adverse impacts as pipeline segments are constructed through any particular area. Construction will occur only durig daylight hours and the pipeline route is not densely populated, so these impacts are not considered significant. Operational noise from electric pumps at the two pump stations will reach a maximum of 54-64 dBA 100 feet away from the two pump stations. This is roughly equivalent to the noise from an ordinary conversation three feet away, or from a dishwisher 10 feet away. This worst-case condition assumes operation at 60 MGD and minimal attempts at noise attenuation. Through proper design of the pump station and planting noise-absorbing vegetation, noise levels may be reduced. There are presently no noise-sensitive receptors (hospitals, churches, libraries, schools) near enough either proposed pump house to be affected.

Energy Needs: No significant effects are anticipated. Energy will be expended during construction, mostly in the form of diesel oil and gasoline. The City estimates that 27,345 megawatt hours (MWH) of electricity will be used annually by the Pea Hill Creek pump station and another 22,750 MWH by the booster pump station, during a 60 MGD pumping year. The water withdrawal will reduce VEPCO's generating capacity at Gaston and Roanoke Rapids by a maximum of approximately 330 Kilowatt hours per million gallons withdrawn. This would amount to, at most, a 0.16% reduction in power generation from the combined Kerr, Gaston and Roanoke Rapids hydroelectric complex.

The City has asked Wilmington District Corps of Engineers to reallocate storage in Kerr to support the proposed withdrawal from Lake Gaston. The quantity which would be reallocated has been calculated to be 10,200 acre-feet. All conservation storage (1,027,900 acre-feet) in Kerr is presently allocated to hydropower. Water released from storage for water supply would pass thru the turbines at Kerr so there

would be no change in energy generation. Effects, if any, would be a reduction of less than 1 MW of dependable capacity at Kerr.

m. *Land Use Classification:* No significant effects are anticipated. Except in the six-mile section of the pipeline route east of Pea Hill Creek, there should be no additional land use restrictions imposed as a result of this project.

n. *Water Supply and Conservation*: No significant effects are anticipated. The project would supply the projected populations of Virginia Beach, Chesapeake, Franklin and Isle of Wight through the year 2030 with an autonomous source of easily treatable raw water. The quantity (60 MGD) would support these projected populations so as to avoid having to impose mandatory water restrictions or rationing of water. Through building code changes, new construction must already include water conserving features, such as flow restrictors and low-flush toilets. This proposed water source is not expected to stimulate population growth but merely to serve the growth that is predicted to occur. If this alternative did not exist, the applicant would be forced to find another source to serve the projected population which would probably have greater adverse economic and/or environmental impacts (See Section 4s).

Several entities presently withdraw water from these three Roanoke River lakes (Towns of Clarksville, Henderson, and Roanoke Rapids) and from the river itself. Those who withdraw from the river above Kerr will not be affected by the project; neither will those who withdraw from Lake Gaston. The minor increase in water level fluctuation in Kerr and the minor reduction in flow below Lake Gaston should not adversely affect any of the existing water intakes. Future intakes or increased intake by those in the vicinity of the lakes are not likely to be adversely affected by this project. Since most of those who withdraw water from the lakes discharge back into the basin, the net quantity of water in the system should not significantly be affected from future intakes. An exception might be if several large, water intensive industries or similar entities located in the region, whose water would not be returned to the system. Each additional intake which is evaluated through the Corps permit program will be examined to make sure that it will not individually or cumulatively unacceptably affect other uses of the water bodies.

o. *Mineral Needs*: No effects anticipated.

p. *Safety*: See (a) and (i) above.

q. *Socioeconomics:* No significant effects are anticipated. Construction of the project would cost the applicant approximately $176 million. Total employment during construction is estimated by the City to be approximately 150 people. It is uncertain how many of the work force will be local. All money spent in salaries for local workers and on materials supplied locally will find its way into the local economy. Little secondary employment is expected since the primary employment would only occur during the construction phase. Money spent locally will be multiplied to some extent as it is spent and respent while it travels through the local economy. Subject to Corps permit review, as discussed in (n) above, the project should not preclude any future local commercial or industrial development. As discussed in (d) above, future NPDES permits should not be affected. Downstream industries which use water would have approximately 1% less water to use on average, but most such industries depend on available minimum flows, which would not change.

Probably the largest perceived adverse socioeconomic impact is a depression of local real estate values due to what appears to be a pervading fear of other adverse impacts associated with the project. Many people believe that the Lake Gaston-Kerr region will not be as nice a place to live if the City's project is approved. This adverse preception has been pointed out by real estate brokers, appraisers and developers, who claim that some potential land sales have already been cancelled because of fear the City will obtain a Corps permit. As yet no documented evidence has been presented showing a decrease in real estate valuation which can be attributed to the City's proposal. While largely a psychological phenomenon, this reaction could have a tangible adverse economic effect, and therefore warrants some discussion.

The potential for adverse effect on property sales and values appears to stem from: (1) a fear of impacts from this project, (2) a fear that the project will establish a precedent and, (3) a fear that, due to the precedent, other localities will propose similar projects. As outlined in this assessment, the proposed project will have only minimal environmental effects. A great deal of publicity has been generated about this project containing incorrect or grossly exaggerated claims regarding lake levels, noise, effects on fisheries, etc. While it is true that the project will provide very little, if any benefits to the Lake Gaston/Kerr/Roanoke Rapids region, it appears that it will also create very little harm. This project would not create a precedent for withdrawing water from the 3-lake system as the towns of Henderson, Clarksville and Roanoke Rapids already withdraw water. Nor would interbasin transfer in

the Roanoke basin be a precedent: the City of Roanoke and the Town of South Hill presently draw water from other basins and discharge into the Roanoke basin, and Oxford, North Carolina draws water through Henderson from Kerr and discharges it into the Tar River basin (17). Any future withdrawals from other cities which require Corps permits will have to be reviewed individually and cumulatively for adverse impacts before any such permits are issued. As these facts receive wider publication, attitudes should change and real estate values would not be expected to be affected.

The legality of interbasin transfer has been raised as an issue. It is the Corps policy that allocation of water is a State responsibility. The Clean Water Act states that "It is the policy of Congress that the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or otherwise impaired by this chapter." (33 U.S.C. 1251(g))

r. *Possible Cumulative Impacts:* No significant effects are anticipated. As discussed in (q) above, this project would not constitute a precedent and would not necessarily stimulate future, similar proposals. Previous Corps water withdrawal permits for Norfolk (Blackwater and Nottoway Rivers), Chesapeake (Northwest River) and Elizabeth City (Pasquotank River) have not resulted in additional permit applications to tap these resources. However, if future, similar proposals are made, they will be thoroughly evaluated in terms of impacts and available alternatives. If they are found to cause unacceptable individual or cumulative impacts, the permits will be denied

s. *Alternatives*

(1) Alternative locations of the intake: Locations elsewhere in Pea Hill Creek, adjacent to the Gaston dam, and below the dam have been suggested. The applicant has indicated that the City could not undertake construction in the State of North Carolina. The only environmental gain from moving the intake out of Pea Hill Creek would be elimination of the 6% increase in flow reversal. Construction costs would be similar, as would lake level impacts. Since construction in North Carolina would presumably entail a partnership, or at least a contract of some sort with that State, it is doubtful that the City would be obtaining an autonomous water source, which is part of the project purpose. Construction elsewhere in Pea Hill Creek would have no environmental advantage over the proposed site.

(2) Desalting: Desalting of ocean water by reverse osmosis would leave residual sodium levels which would contravene levels set for those on a "restricted" sodium diet. Thermal desalting would remove the sodium, but is extremely energy intensive and would incur adverse secondary impacts of requiring construction (either locally or regionally) of additional power plants with concommitent air pollution or nuclear risk. Disposal of the salt sludge could present environmental problems. Reverse osmosis, considerably more energy efficient than thermal desalting, would still require at least one megawatt per million gallons per day, or over 525,000 megawatt hours per year. Again, brine and sludge disposal could present evironmental problems. Desalting of brackish groundwater could cause drawdowns which would dry up some existing wells and raise the sodium and chloride levels in others.

(3) Control Growth: As described by some commentors, this alternative would eliminate or minimize the need for the project by halting or limiting the population increase. Virginia Beach already has zoning regulations dictating the use of developable land and the development density. Many factors other than water availability influence population growth and Virginia Beach's population is expeced to increase greatly in the next 50 years. Failure of a municipality to provide services to residents and prospective residents may not be a legally acceptable way of controlling growth in the Commonwealth of Virginia (18). Even if a city were to refuse to provide water, residents could still dig shallow wells. This would create health problems and would shortly overtax the shallow water aquifer.

(4) Other Reservoir Locations: Sites for reservoirs have been suggested for Assamoosick Swamp, Lake Genito (Appomattox River), headwaters of the Roanoke River, and the James River. All of these would involve constructing new dams and would significantly alter flow regimes. Both Assamoosick and Genito would flood significant acreages of wetlands (several thousand acres for Assamoosick). A large dam at the headwaters of the Roanoke would have limited inflow, so water levels may fluctuate widely. The pipeline connecting it with Virginia Beach would be about three times longer than the proposed one. The James is presently tidal up to Richmond, is a heavily used shipping artery and supports a multi-million dollar seafood industry. Any of these alternatives would definitely be considered to have a significant adverse effect on the quality of the human environment.

(5) Direct Withdrawal From Other Rivers: Suggested rivers included by commentors were the James, Rappahannock, Elizabeth, Chowan, York, Potomac, Pasquo-

tank, Appomattox, Nansemond and Lafayette. To develop some of these sources would require construction in North Carolina, an action the City has indicated it could not take. The Chowan River has experienced significant water quality problems in recent years and has been the subject of much study by the State of North Carolina to determine causes and solutions. The Chowan has only half the average flow as the Roanoke and its low flows are not regulated as the Roanoke's A 60 MGD withdrawal from this river would have to be studied and modeled in great detail before any determination of acceptability could be made. All these streams are brackish for all or part of their lengths and withdrawals from these reaches would require desalting. Withdrawals from the freshwater reaches below the fall line would to some degree be susceptible to saltwater intrusion. Most of these streams do not have sufficient flow to support a 60 MGD withdrawal above the fall line. Of those which do have a potential for supporting a 60 MGD withdrawal, it would be necessary to construct a longer pipeline than is required by the proposal, and one which would traverse more environmentally and, in some cases, socially sensitive areas.

(6) Local Cooperation and Interconnection: This alternative concerns a published report titled "Institutional Issues Affecting Water Supply Development" prepared by Virginia Polytechnic Institute and State University (19). The report analyzes demands and supplies and recommends interconnection of existing systems, installing water-saving devices, and the development of additional ground water supplies. Most of the existing systems are interconnected. These interconnections permit water to be shared more readily and make it easier to deal with emergencies; however, they do not increase the total supply, nor do they satisfy the City's desire for ownership of a source. Many of the water-saving devices recommended in the report are included in the City's projection of future demands. The City projects its gross per capita water use, which is now significantly lower than the present average for either Virginia or North Carolina, to decline in the future. The report estimates a deficit of 50.1 MGD in year 2025 if water-saving devices are installed. Extrapolating this value to year 2030 would result in a deficit of about 55 MGD. Considering that these were independent analyses and are based on different data, this deficit is very close to the 60 MGD proposed by the city. Groundwater is addressed below.

(7) Conservation: during the 1980–81 drought the City instituted voluntary water restrictions at first, the mandatory restictions, and finally rationing. With increasing population, even rationing would not produce adequate water savings within a few years, were the area to experience another such drought. The City's proposal contemplates voluntary conservation during drought's but planned to avoid mandatory restrictions or rationing.

(8) Recycling: The Virginia Health Department has recommended strongly against this alternative as constituting a health hazard if used potably (20). Practically all of Virginia Beach's water demand is for potable or domestic use. An unsafe supply is not an acceptable alternative.

(9) Groundwater: Several studies have pointed out that the principal groundwater acquifers are presently at or exceeding their maximum withdrawal rate. North Carolina has expressed concern over existing groundwater withdrawals in Virginia, contending that they already adversely affect North Carolina groundwater. If more groundwater were to be withdrawn, some existing wells could begin to go dry. Groundwater quality can present problems also, often exceding recommended levels of fluoride and sodium. Virginia Beach has recently drilled five wells in counties to its west to be used as an emergency source until a permanent source is located. Some commentors have suggested that these wells be utilized as permanent source of water. Through local agreement with those counties, these wells can only be required to be pumped during an officially declared emergency. Not all of these agreements are atuomatically renewable upon expiration, so that in 10–15 years some of these wells may no longer be available to the City. In addition these wells were not constructed until after the 1980–81 drought. If all the existing deep wells were pumped at the same time during a drought in the future, the increased total number of wells may not be able to pump at their rated capacities.

(10) Coal Slurry: This alternative envisions using water from a coal slurry pipeline from the western part of the State. No such pipeline currently exists and its potential future rests before the Virginia General Assembly. Were it to be possible, the source and quantity of the water are unknown. It is also uncertain if the water would be treatable after becoming polluted by the coal.

(11) Icebergs: This Alternative would involve towing icebergs by ship from the North Atlantic to be later melted and used for drinking water. At present, no feasible means for towing icebergs long distances has been developed.

5. *Adverse environmental effects which cannot be avoided should the proposal be implemented.*—The temporary environmental disruption during construction and the occasional additional drawdowns in Kerr and slightly reduced flows downstream cannot be avoided.

6. *The relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity.*—The project would meet a long-term need for water for Virginia Beach, Chesapeake, Isle of Wight and Franklin. Long-term productivity in the Kerr/Gaston region should not be reduced.

7. *Any irreversible or irretrievable commitments of resources which would be involved in the proposal should it be implemented.*—Unless water is chemically altered or permanently isolated, it remains part of the hydrologic cycle, Issuance of the City's permit would represent a commitment of up to 60 MGD of water, but that commitment would be neither irreversible nor irretrievable. Energy used to construct and maintain the project is the principal commodity which would irretrievably be lost.

8. *Coordination.*—This project was first announced for public comment on July 25, 1983. That comment period lasted until September 6, 1983 and included a public hearing held in Lawrenceville, Virginia on August 25. A draft environmental assessment and draft Finding of No Significant Impact were released for public comment on October 11, 1983 and that comment period remained open until November 28, 1983 and included a public hearing in Roanoke Rapids, North Carolina on November 14 and one in Virginia Beach on November 17. These three hearings were attended by some 6000 people. Transcripts of comments made at these hearings and letters received during the public comment periods are available for viewing at the Norfolk District offices during normal business hours.

RONALD E. HUDSON,
Colonel, Corps of Engineers District Engineer.

December 7, 1983.

Enclosure Appendix A.

REFERENCES CITED

(1) "Lake Gaston Water Supply Project Environmental Report", prepared by C. E. Maquire, Inc. for the City of Virginia Beach, July, 1983.

(2) Letter from Wilmington District to Norfolk District, Army Corps of Engineers, August 22, 1983.

(3) Personal Communication from Mr. James Midkiff, Wilmington District, Army Corps of Engineers to Bob Hume. Norfolk District, October, 1983.

(4) Letter from U.S. Geological Survey to Norfolk District, November 25, 1983.

(5) Personal Communication from Mr. Carter Glenn, VEPCO, to Bob Hume, November1983

(6) Exhibit B of letter from City of Virginia Beach to Norfolk District, September 6, 1983.

(7) Personal Communication from Mr. Trevor Clements, North Carolina Division of Environmental Management to Bob Hume, September, 1983.

(8) "Hydrology of Major Estuaries and Sounds of North Carolina", USGS/WRI-79-46, 1979.

(9) "A Practical Intake Screen Which Substantially Reduces the Entrainment and Impingement of Early Life Stages of Fish"; Hanson, Brian N., et al., Fourth National Workshop on Entrainment and Impingement.

(10) "A Further Study on the Protection of Fish Larvae at Water Intakes using Wedge-Wire Screening", Division of Water Resources, Tennessee Valley Authority, Technical Note B33, May 1979.

(11) "Evaluation of an Improved Walleye (*Stizostedion vitreum*) Spawning Shoal with Criteria for Design and Placement"; Minnesota Department of Natural Resources, Investigative Report Number 340, November 1975.

(12) "Draft Report of the Steering Committee for Roanoke River Studies 1955-1958", June 30, 1959.

(13) "Endangered and Threatened Plants and Animals of North Carolina", North Carolina State Museum of Natural History, 1977.

(14) Letter from North Carolina Department of Natural Resources and Community Development to Virginia Members of the North Carolina-Virginia Water Supply Technical Liasion Committee, March 3, 1983.

(15) Personal Communication for Mr. Thomas Leahy, Virginia Beach Department of the Public Utilities to Bob Hume, September 1983.

(16) Personal Communication from Mr. Art Temple, Process and Utility Corporation to Bob Hume, September 1983.

(17) Personal Communications from South Hill, Virginia Town Manager's Office, City of Roanoke Water Office and Oxford, North Carolina Town Manager's Office to Bob Hume, September 1983.

(18) *Board of Supervisors* v. *Horne*, 216 Va. 133 (1975). *William* v. *Board of Supervisors*, 216 Va. 49 (1975).

(19) "Institutional Issues Affecting Water Supply Development: Illustrations from Southeastern Virginia", Virginia Water Research Center, Bulletin 138, March, 1983.

(20) Letter from Virginia Department of Health to City of Virginia Beach, April 29, 1983.

Appendix A

Final Analysis of the Proposed Discharge With Respect to Section 404(b)(1) of the Clean Water Act

This analysis is made pursuant to the 404 (b)(1) Guidelines (40 CFR 230) as printed in the Wednesday, 24 December 1980 Federal Register.

Subpart C: Potential Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem: Discharges in Pea Hill Creek would include bedding material for a boat ramp, bedding and backfill for two intake pipes and the creation of a ¼–½ acre spawning area. The bedding for the boat ramp will be gravel and the bedding for the pipeline will be sand-size or coarser material. Backfill over the pipeline will be of stone riprap. The spawning area will consist of graded stone over filter fabric. Four to six inches of ½–1" rock will be placed on the fabric, and approximately 12 inches of three to nine inch rock will be placed on top of the smaller stone.

The net physical effect on the substrate will be to change its present surface (generally non-vegetated clay) to stone riprap (for the pipeline and spawning areas) or a concrete slab (which will be placed on the bedding gravel to form a boat ramp). The stone and filter fabric will be chemically inert in this environment, as will the concrete slab after it has cured. The discharge materials themselves will not contribute to turbidity in the water column, although their placement may momentarily stir up the bottom sediment. The discharge materials themselves will not alter current patters, water circulation, salinity gradients or normal water fluctuations. The withdrawal of water may affect these factors, but the withdrawal is not a Section 404 discharge, nor is it technically dependent on any Section 404 discharges. Impacts of the withdrawal are discussed extensively in the environmental assessment.

Bedding (where required) and backfill for the stream crossings along the 84.5 mile pipeline route will either be of sand-size or coarser material (bedding) or native material (backfill) which had been excavated from the trench. Even though the backfill material will be native, the physical handling of it will temporarily and locally increase turbidity and may increase BOD. These effects can be minimized by performing the construction during dry periods to the extent practical. The backfill material will be graded to preexisting contours, so current patterns, water circulation, normal water fluctuations and salinity gradients should not be affected.

Subpart D: Potential Impacts on Biological Characteristics of the Aquatic Ecosystem: The discharges should not affect any species listed as threatened or endangered by the U.S. Fish and Wildlife Service or the Department of Commerce. The Pea Hill Creek discharges will create a diversity of habitant and will directly and indirectly benefit some species, particularly walleye. Since most of the bottom of Lake Gaston in unvegetated clay, the alteration of these small portions of Pea Hill Creek should not create a hardship for species preferring that habitat.

Along the pipeline route, native soils will be used to backfill over the pipe. Local seed sources should result in natural revegetation with indigenous plant species. As mentioned in the assessment, vegetation will be periodically cut to ensure access, but this is not an effect of the discharge, and would occur if no discharges were involved.

Subpart E: Potential Impacts on Special Aquatic Sites: The discharges are not expected to affect any designated refuges or sanctuaries, tidal mudflats or coral reefs. No discharges will occur in Pea Hill Creek which would affect vegetated shallows. Pipeline crossings of streams along the pipeline route will be regarded to preexisting contours, so riffle and pool complexes and any vegetated shallows should not suffer any long-term adverse effects.

Discharges and other construction impacts will temporarily disrupt approximately 760,000 square feet of wetlands along the pipeline route. These areas will be regraded after the pipeline is placed, but, as discussed in the assessment, there will be a

bias during and after revegetation in favor or herbaceous wetland species. In terms of total wetland area, there should be no net change.

Subpart F: Potential Effects on Human Use Characteristics: Discharges due to this project should not adversely affect any water supplies, qualitatively or quantitatively. (See the environmental assessment for a discussion of the impacts of the withdrawal on other water supplies.) If creation of the artificial spawning area is successful, the discharge should have a positive effect on recreational fishing. Along the pipeline route, construction-related turbidity may temporarily adversely affect fish in the small streams which will be crossed. The discharges along the pipeline route will have a temporary negative aesthetic impact until they become revegetated. No parks, monuments, or other such preserves should be affected by the project

Subpart G: Evaluation and Testing: Because all discharge material will either be chemically, biologically and physically inert (in Pea Hill Creek) or will consist of native material not expected to be contaminated or polluted (along the pipeline route), no testing is required under this Subpart.

Subpart H: Actions to Minimize Adverse Effects: After evaluating several pipeline routes, the applicant now proposes one which avoids most sensitive environmental areas by confining approximately 90% of the route to previously used and/or disturbed areas. Standard sedimentation and erosion control practices and proposed and all denuded areas will be stabilized in some manner.

Subpart B: Compliance with the Guidelines: Of the several alternatives discussed in the environmental assessment, all of the practicable ones would either have a greater adverse impact of the aquatic ecosystem or would have other significant, adverse environmental consequences. The proposed activity is water dependent. The environmental assessment indicates that no significant cumulative or secondary inpacts associated with the impacts of the project discharges are expected. Based on a evaluation of Subparts C-G above, it is may finding that the proposed discharges of dredged or fill material comply with the requirements of these Guidelines.

December 7, 1983.

RONALD E. HUDSON,
Colonel, Corps of Engineers, District Engineer.

Mr. VALENTINE. Do you know whether the corps reviewed the comprehensive study which was prepared by Dr. Ronald Sneed, entitled "Projected Irrigation Water Requirements for Northeast North Carolina Above Cape Lookout for the Year 2020"?

Mr. DAWSON. I believe that was part of the record but we will confirm that for you, Mr. Congressman.

[The following was received for the record:]

RESPONSE FROM MR. DAWSON

The Corps did review the comprehensive study by Dr. Sneed. Wilmington District awarded a graduate fellowship which made the study possible and provided assistance and guidance during the study. For several reasons, though, another study (prepared by the North Carolina Department of Natural Resources and Community Development) was cited in Norfolk District's Final Environmental Assessment (FEA).

First, and most important, the 9,666 square mile Roanoke River Basin overlaps Dr. Sneed's entire 17-county study area only in a roughly 250 square mile section of Bertie County. The results of Dr. Sneed's study cannot be arbitrarily applied to the 97% of the Roanoke River Basin lying outside the study area. Second, Dr. Sneed's study was completed 13 years ago and only projects irrigation needs through the year 2020. Third, Dr. Sneed used assumptions which, if made today, might be considered unreasonable in light of economic, political and environmental regulatory changes which occurred during the 1970's.

The study prepared by the State of North Carolina was done in 1983 and covers much more of the Roanoke River Basin than Dr. Sneed's study. Its projected irrigation needs for 2030, cited in the FEA, are much lower than Dr. Snead's projections for 2020, a further indication that Dr. Sneed's study is not applicable to the Roanoke River Basin. As the FEA explains, based on North Carolina's projections, its future irrigation needs from the Roanoke River, when combined with Virginia Beach's 60 MGD withdrawal, will constitute between 1.1 and 1.3% of the river's average annual flow.

Mr. VALENTINE. In view of the continuing concerns of Government fish and wildlife experts about the effect of Lake Gaston diversion on bass spawning, did you make any studies to determine how this withdrawal would affect that resource?

Mr. DAWSON. I did, Mr. Congressman, we will have to get that.

[The following was received for the record:]

RESPONSE FROM MR. DAWSON

A review of the literature and present practices is contained in the Final Environmental Assessment. In summary, the City's withdrawal would on a worst-case basis result in a 2 percent loss in potential spawning time once every four years. This was not considered significant because a number of variables other than river flow are thought to influence stripped bass spawning and survival. For example, a 1977 publication by the North Carolina State Museum of National History notes "Severe industrial pollution . . . at Roanoke Rapids imperils successful spawning. The local water will not support the fish's early developmental stages."

Mr. VALENTINE. That would have been part of an environmental impact study statement that had you made it, it would be all bound up and it could be issued and people would have an opportunity to look at it and see what you had done, would it not?

Mr. DAWSON. Yes, sir, it could also be part of the environmental assessment, and that is what I need to get.

Mr. VALENTINE. You do not have the environmental assessment either?

Mr. DAWSON. General Edgar has it here but I do not know that we can find for you right away the—whether that was included.

Mr. VALENTINE. Were you aware that region 3 of the Environmental Protection Agency has been studying the water quality effects of the diversion in order to determine whether the Lake Gaston project complies with the requirements of the Clean Water Act?

Mr. DAWSON. I am sure they have looked at that, yes, sir. And as I mentioned in response to Congressman Stangeland, that office and EPA generally had an opportunity throughout to comment on the merit.

Mr. VALENTINE. Mr. Dawson, would it surprise you to know that the permit was issued before the EPA made any decision concerning how this project would affect water quality in that area?

Mr. DAWSON. Yes, sir, it would.

Mr. VALENTINE. Now, knowing—and I am just about through, Mr. Chairman, I appreciate your indulgence.

Knowing in November of 1983 that a bill had been introduced by Congressman Jones, the senior Democrat in the North Carolina delegation which is really the area mainly affected although southern Virginia is concerned, but the large part of the shoreline of these two lakes is in North Carolina and into my district, the 2d Congressional District. You knew in November 1983 that a bill had been introduced in the Congress and by Congressman Jones and by me and Congressman Dan Daniel and Congressman Neal and I believe Congressman Martin. I believe you knew because we notified you that a hearing was scheduled on this question as to whether or not the corps in this situation would do what you require of so many others in so many other different situations, that is just make an environmental impact statement. You knew that the legislation was here to require that, you knew that a hearing was

scheduled. Why did you just ignore that and go ahead and issue this permit?

Mr. DAWSON. Mr. Congressman, I can assure you it was not ignored and that fact and this hearing is very important to us. I have to say though that our regulations which are promulgated pursuant to the law that this committee and the Congress passed does not provide for deciding whether we do an EIS on whether or not a bill is pending. I know there are many permit actions in the State of North Carolina that we are trying to expedite just as we did this one and I think it is a question of whether the mere presence of a bill or of a hearing should derail the administrative process. There may be legal liabilities involved if we terminate or alter the duly promulgated process based on those grounds.

But that certainly should not be interpreted as a lack of responsiveness or a lack of respect for the actions taken because we do think those are significant.

Mr. VALENTINE. One more question:

Given the feeling among some people around in the Gaston Lake and Kerr Lake area and in that part of North Carolina and in southern Virginia, given the feeling that there are abundant sources of fresh water in Tidewater, Va., but that they are polluted, given the feeling that it exists and that Tidewater, Virginia should solve this problem by cleaning up its water rather than by the expedient of running a straw or a pipe 100 miles away and sucking up water from another area, has the corps done anything, issued any documents, any material to allay that fear, to demonstrate or to combat that argument?

Mr. DAWSON. Mr. Congressman, I think you put your finger on an important issue that simply is not within the corp's purview under the section 404 permitting program.

I think one of the things we have encountered in trying to make the corps' regulatory program work better is that issues which are very legitimate and very understandable get loaded on top of the 404 regulatory process. The corps has a public interest review responsibility but I am not sure whether or how far they can go in looking behind the applicant's application. That issue may very well have been reviewed by the District Engineer. I simply do not know.

Mr. VALENTINE. Mr. Dawson, the environmental impact statement would have answered all of these questions, would it not?

Mr. DAWSON. I am not so sure, Mr. Congressman, because again the environmental impact statements that we prepare around the country are certainly challengeable documents too. That may or may not have been an issue that would have been taken up.

Mr. VALENTINE. Well, is time—I know it could be money, but is time—are you saying that is the only reason you did not go ahead and do this? I mean it seems to me there is enough controversy about it for it to be the prudent thing for you to do. I mean you say if you think you are right, if you think you have got all the facts on your side, then why is it not to your advantage to accumulate them in some readable form and say here it is?

Mr. DAWSON. Well, again, I think that is the District Engineer's decision and you may have——

Mr. VALENTINE. And he is not here?

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Mr. DAWSON. No, sir.

Mr. VALENTINE. Thank you.

Mr. ROE. Let me ask one more question for the record.

You revealed both in your written testimony which I now have read and also in your verbal testimony that procedures were followed and there were public hearings held?

Mr. DAWSON. Yes, sir.

Mr. ROE. Were many of these issues of controversy raised at those hearings, do you know offhand?

Mr. DAWSON. Yes, sir, they were. And I think the Corps of Engineers in this particular case, because of the controversy that the Congressman quite rightly points out and the great interest, went more than the normal as far as the number of public hearings that were held. As I mentioned briefly in my statement, there was the circulation of the draft environmental assessment and then the final assessment itself was circulated with a 30-day comment period each time.

There were two sets of public hearings held. The second set was held because of the feeling that maybe all of the issues had not been aired. I am told those public hearing were very well attended; thousands of people attended and were given an opportunity to testify.

So I think the record was amply open.

We can provide, if you like, Mr. Chairman, the dates and particulars of those opportunities.

Mr. ROE. I think it would be helpful.

[The following was received for the record from Mr. Dawson:]

During the Norfolk District's processing of the permit application, three public hearings were held. The first was in Lawrenceville, Virginia on August 25, 1983, the second in Roanoke Rapids, North Carolina on November 14, 1983, and the third in Virginia Beach, Virginia on November 17, 1983. All of these issues discussed above as well as many others were voiced by concerned parties. Each was evaluated by the Norfolk District Engineer and addressed in his Final Environmental Assessment, Statement of Findings, or Finding of No Significant Impact.

Mr. ROE. Are there any further questions?

I want to thank you very much for your presentation. Please get to us as quickly as possible that other background data that we asked for. I want to thank you very much for your testimony.

Our next witness is the Honorable Walter B. Jones from North Carolina, our distinguished colleague and highly respected Member of the Congress of the United States.

Congressman Jones, I want to welcome you to the committee.

The full text of your prepared statment will appear in the record at this point.

[Statement referred to follows:]

Testimony by Congressman Walter B. Jones before Subcommittee on Water Resources, Committee on Public Works and Transportation.

February 8, 1984

Mr. Chairman, I appreciate the opportunity to testify in support of H.R. 4317. I introduced this bill to require the Corps of Engineers to do a complete Environmental Impact Statement before issuing any permit for the construction of a pipeline project between Lake Gaston and Virginia Beach, Virginia. It seems to me that this bill requires the Corps to do no more than what the Corps requires others to do -- that is -- to comply with the law.

I would like to first thank you for scheduling a hearing on this bill. Inasmuch as I was here only yesterday on another matter of interest, I know the pressing business which the Subcommittee faces. Ideally, we should not be here and no legislation should be needed on this matter. In my opinion, the Corps should have required an Environmental Impact Statement in the first instance. However, when the Corps indicated its plans to grant a permit for the project without doing an EIS, I introduced this legislation, hoping to achieve legislatively what should have been done as a matter of course.

The National Environmental Policy Act requires an EIS when a major federal action will significantly affect the human environment. After a little study, it is clear to me that the proposed project -- which would pump 60 million gallons of water per day out of the Roanoke River Basin -- will significantly affect the environment in the Roanoke River Basin.

First, consider the degree to which the possible effects on the environment are uncertain. For example, there is controversy over how the proposed project will affect lake levels in the Kerr Reservoir. There is uncertainty about how the project would affect water flow in downstream areas and how the water withdrawal will affect fish populations in downstream areas. Uncertainty exists over the immediate, and more importantly, the future effects of large scale water withdrawal on the hydrology and water quality of the Roanoke River and the Albemarle Sound.

You will surely hear people today who will vouch for the Corps' assessment that these effects are minimal. But, there are credible witnesses on the other side as well. Frankly, after seeing the views of both sides, I believe there is substantial uncertainty as to what risk we will be taking if this project goes forward.

As a second factor to consider, you must note that the effects of the project should be viewed as cumulative. The cumulative effects on the natural environment must then be considered in conjunction with the economic impact that can be expected as a result of the natural changes. Already, real estate values in areas surrounding the lake have declined. The Corps indicates that this is a temporary phenomenon. However, this is but another uncertainty that we must consider.

Thirdly, the project, if completed, will set a precedent for future withdrawals of large amounts of water for municipal purposes. The withdrawal contemplated is at least 60 times as large as any similar water withdrawal. Setting such a precedent will mark the Roanoke River System as a prime target for others who could benefit by taking large amounts of water out of the water basin. Should we as a matter of policy allow this to happen -- allow this precedent to be set -- without an examination of the consequences? I believe that it is better to discuss the question now, in an EIS, than to regret the matter later.

Finally, consider that the issue of the pipeline is very controversial. Over 6,000 people attended the various Corps field hearings on this subject and, by any measure, the intensity of emotion at these hearings was extremely high. As you will hear later today, there is a tremendous amount of controversy surrounding the Corps' environmental assessment and the decision that the project would not produce significant effects. This is the perfect example of a situation where an EIS is needed to allow an objective airing of heated controversies.

Mr. Chairman, in my opinion, the environmental impact of the project is enough by itself to require an EIS under the National Environmental Policy Act. However, there is a related issue which concerns the water storage which would be required for this pipeline project to operate.

Because Lake Gaston must be kept at specific levels, the water which is withdrawn from Lake Gaston will have to be stored upstream in Kerr Reservoir. The Reservoir was created by the Flood Control Act of 1944 for the specific purposes of flood control, hydroelectric power generation and low-flow regulation of the Roanoke River. In other words, one of the purposes of the Reservoir is to help maintain a minimum flow of water in the Roanoke River for water quality and fisheries management purposes. Water storage for muncipalities was not included as an original purpose of Kerr Reservoir.

The Water Supply Act does authorize the Corps to enter into contracts for municipal water storage in federal reservoirs. However, the Act specificaily requires Congressional approval of any reallocation of water supplies that will seriously affect the purposes for which the project was constructed. Since the Corps must reallocate water in Kerr Reservoir to compensate for the withdrawal from Lake Gaston, a similar amount of water will be unavailable for low-flow regulation of the Roanoke River. To the extent that 60 million gallons per day may be withdrawn from Kerr Reservoir, and thus unavailable for low-flow regulation, this authorized purpose would be seriously affected by such a reallocation. The impact of this will be especially severe in drought years. Therefore, no water storage for this amount of water should be provided in Kerr Reservoir unless Congress first approves.

Mr. Chairman, I urge the Subcommittee to consider what both sides will say today. I believe that the uncertainty and controversy will be evident and so will the need for an EIS.

Since my original bill was geared to the Section 404 permitting process, and since the Corps has seen fit to go ahead and issue the permit necessary

for the project, I would respectfully suggest that the Subcommittee adopt an amendment to the bill that would require an EIS, notwithstanding the fact that a 404 permit has already been issued.

This could be done by language which would disapprove the reallocation of water in Kerr Reservoir unless an Environmental Impact Statement is done. It could also be done by barring any further action by the Corps which might be necessary for the permittee to go forward with construction. I have some draft language which I think would accomplish this purpose and I would be happy to share it with the Members of the Subcommittee.

In conclusion, Mr. Chairman, I do not wish to appear insensitive to the needs of the citizens in the Virginia Beach area. I realize that the water problem in that area is a real one and the pipeline is perceived as a solution. However, the Subcommittee will receive testimony today that will suggest viable alternatives to this particular means of solving the water problems of Virginia Beach. The Corps maintains that no other option -- except for the pipeline -- is viable. But, there is disagreement on this issue. Again, a complete EIS would tell us more. Perhaps a better solution for all concerned can be found. I believe that the citizens who live in the Roanoke River Basin as well as those in Virginia Beach deserve an objective analysis.

The Corps should be required to comply with its own regulations that require an EIS. I urge the Subcommittee to act on this matter by approving legislation as soon as possible.

Mr. ROE. Please proceed.

TESTIMONY OF HON. WALTER B. JONES, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NORTH CAROLINA

Mr. JONES. Thank you, Mr. Chairman.

Mr. Chairman and members of the subcommittee, I appreciate this opportunity to testify in support of H.R. 4317. We introduced this bill to require the Corps of Engineers to do a complete environmental impact statement before issuing any permit for the construction of a pipeline project between Lake Gaston and Virginia Beach, Va. It seems to me that this bill requires the corps to do no more than what the corps requires others to do, and that is to comply with the law.

The previous witness mentioned the fact that rarely was an environmental impact statement required for water impoundment. Let me remind the subcommittee that rarely has any project of this magnitude and size been before the Corps of Engineers.

I would like to thank you for scheduling a hearing on this bill. Inasmuch as I was here only yesterday on another matter of interest, I know the pressing business which the Subcommittee faces.

Ideally, we should not be here and no legislation should be needed on this matter. In my opinion, the corps should have required an environmental impact statement in the first instance. However, when the Corps indicated its plans to grant a permit for the project without doing an EIS, we introduced this legislation, hoping to achieve legislatively what should have been done as a matter of course.

The National Environmental Policy Act requires an EIS when a major Federal action will significantly affect the human environment. After a little study, it is clear to me that the project—which would pump 60 million gallons of water per day out of the Roanoke River basin—will significantly affect the environment in the Roanoke River basin.

First, consider the degree to which the possible effects on the environment are uncertain. For example, there is controversy over how the proposed project will affect lake levels in the Kerr Reservoir. There is uncertainty about how the project would affect water flow in downstream areas and how the water withdrawal will affect fish populations in downstream areas. Uncertainty exists over the immediate, and more importantly, the future effects of large scale water withdrawal on the hydrology and water quality of the Roanoke River and the Albemarle Sound.

You will surely hear people today who will vouch for the corps' assessment that these effects are minimal. But, there are credible witnesses on the other side as well. Frankly, after seeing the views of both sides, I believe there is substantial uncertainty as to what risk we will be taking if this project goes forward.

As a second factor to consider, you must note that the effects of the project should be viewed as cumulative. The cumulative effects on the natural environment must then be considered in conjunction with the economic impact that can be expected as a result of the natural changes. Already, real estate values in areas surrounding the lake have declined. The corps indicates that this is a tempo-

rary phenomenon. However, this is but another uncertainty that we must consider.

Third, the project, if completed, will set a precedent for future withdrawals of large amounts of water for municipal purposes. The withdrawal contemplated is at least 60 times as large as any similar water withdrawal. Setting such a precedent will mark the Roanoke River system as a prime target for others who could benefit by taking large amounts of water out of the water basin. Should we as a matter of policy allow this to happen—allow this precedent to be set—without an examination of the consequences? I believe that it is better to discuss the question now, in an EIS, than to regret the matter later.

Finally, consider that the issue of the pipeline is very controversial. Over 6,000 people attended the various corps field hearings on this subject and, by any measure, the intensity of emotion at these hearings was extremely high. As you will hear later today, there is a tremendous amount of controversy surrounding the corps' environmental assessment and the decision that the project would not produce significant effects. This is the perfect example of a situation where an EIS is needed to allow an objective airing of heated controversies.

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In conclusion, Mr. Chairman, I do not wish to appear insensitive to the needs of the citizens of Virginia Beach area. I realize that the water problem in that area is a real one and the pipeline is perceived as a solution. However, the subcommittee will receive testimony today that will suggest viable alternatives to this par-

ticular means of solving the water problems of Virginia Beach. The corps maintains that no other option—except for the pipeline—is viable. But, there is disagreement on this issue.

Again, a complete EIS would tell us more. Perhaps a better solution for all concerned can be found. I believe that the citizens who live in the Roanoke River basin as well as those in Virginia Beach deserve an objective analysis.

The corps should be required to comply with its own regulations that require an EIS. I urge the subcommittee to act on this matter by approving legislation as soon as possible.

Mr. Chairman, that concludes my statement.

Mr. ROE. We want to thank the distinguished gentleman for his concise statement.

I did not have any questions. I think you set out your case quite clearly.

Mr. Stangeland?

Mr. STANGELAND. I have no questions. I think he has done an excellent job of outlining his concerns.

Mr. ROE. Mr. Valentine?

Mr. VALENTINE. I would like to say thanks to the gentleman for his leadership.

Mr. JONES. Thank you, Mr. Valentine.

Mr. ROE. No questions.

Thank you, Congressman Jones.

Our next witness is the Honorable Dan Daniel, distinguished Representative from the State of Virginia.

We want to welcome you, Dan, to the committee.

The full text of your prepared statement will appear in the record at this point.

[Statement referred to follows:]

STATEMENT BY CONGRESSMAN DAN DANIEL, FIFTH DISTRICT OF VIRGINIA, BEFORE THE SUBCOMMITTEE ON WATER RESOURCES, COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION—FEBRUARY 8, 1984

Mr. Chairman, Members of the Committee, my name is Dan Daniel, and it is my privilege to represent the Fifth District of Virginia, which incorporates a large portion of the Upper Roanoke River Basin.

This is not a happy occasion for me because I am absolutely convinced that if the City of Virginia Beach proceeds with its proposed withdrawal of 60 million gallons of water a day from the Lake Gaston area, irreparable damage will be done to Southside Virginia.

The Corps of Engineers, in its earlier life, was often accused of riding roughshod over environmental and ecological concerns; its solution to any problem was seen as "dig a ditch or build a dam". Over the past decade or so, that attitude has been significantly modified, to the extent that the Corps has placed a growing emphasis on environmental issues, sometimes to the detriment of rational and reasonable development. Why do we now see a return, in this particular instance, to the older ways?

I don't expect an answer to that question. But I do believe we have every right to expect the Corps of Engineers to act in every appropriate way to not be an instrument for degradation of the environment for a narrowly applicable purpose.

A terrible mistake will have been made if the only consideration in this process is simply, or even primarily, water. If this be the case, then the most important consideration of any branch of government, any level of government, will have been ignored.

That consideration is people, and the effect the permit decision will have on them and their future.

I offer you no new information when I state the area surrounding the John H. Kerr Reservoir or Buggs Island Lake as it is called in my District, is not as economi-

cally healthy as some other areas of the State, including Virginia Beach. It does not enjoy the volume and diversity of industry required to meet the employment needs of the people. There are other reasons that people choose to live here.

Some have always been here. Their roots go deep; so deep many do not know when the first of their line arrived. I grew up in the area. Others are new on the scene. They have been drawn by an attractive lifestyle, a pleasant climate, friendly neighbors and a cooperative government.

In truth, many present residents are from out-of-state, and have chosen this region for their retirement homes. Others, having left here to pursue careers elsewhere, have returned to live out their days in one of the most pleasant places man and nature could conspire to create.

Whatever their reasons, today hundreds of thousands of Virginians and North Carolinians call the Roanoke River Basin their home. These are the people whose concerns I share, the people for whom apparently no consideration is being given by those who are charged with the responsibility of permit review.

Those who are young desire jobs—for themselves and for their children, for a better area to raise a young family cannot be found. Those who are no longer young desire a comfortable environment in which to enjoy retirement. And this is a goal we all share.

With the concerns of people foremost in mind, then, I would recommend to the Corps that it give primary consideration to the impact of this decision on the people who will be most affected, the people of the lake area. To do any less would be a violation of the Corps' obligation to all citizens, not just those of one area.

Federal agencies are charged, in the development of regulations, to consider the cost/benefit ratio. Yet the Corps has not indicated that any such calculation has or will be made. I strongly urge that the cost/benefit ratio, as it affects the lake area itself, be made a part of any study which is undertaken.

The water shortage in Tidewater is only a part of a larger problem.

It seems to me the Commonwealth is confronted today with a series of decisions involving water, and there is an inter-connectedness. The water problem in Virginia Beach is the first, but by no means the last, to reach an acute state; others will surely follow, and will just as surely require resolution by federal, state and local officials, But Virginia's water-related problems do not stop there, as those who represent the Commonwealth well know.

The claims of the City of Virginia Beach regarding tourism, such as the announcement in early January that receipts for both hotels and restaurants in Virginia Beach were up more than a quarter for the months of September and October over the same period in 1982, ought to be good news. We would welcome such a report in our area. It is good news for the City and the State's economy. Are not the concerns of the farmers, the businesspeople, the working men and women upstream and downstream from Lake Gaston, of equal or more importance?

There is no question that the Lake Gaston proposal will solve the chronic water problems of Virginia Beach. But in the absence of an Environmental Impact Study, we will not know for certain just what the environmental cost of the project will be until it is too late to do anything about it.

Nor will we know until it is too late just what the economic cost will be—not just to the individuals and localities in the immediate lake area, but to those further upstream, who, if this project goes forward will find themselves vulnerable to other localities which seek additional water.

Mr. Chairman, the Fifth District is not a high-income area. Its economy has been steadily eroded by the loss of markets for shoes, textiles and garments to foreign manufacturers. The future of the tobacco industry is in question.

I claim no expertise in the matter of water resources. I leave that to the experts. But commonsense tells me, as I trust it will tell you, that this project's potential effect is far too serious to move forward in the absence of all evidence which might result from an Environmental Impact Statement.

Virginia has sometimes been criticized by those of lesser patience for its apparent reluctance to rush to decisions. But this reluctance has not been without its advantages. Partly as a consequence of this, the Commonwealth has acquired a reputation for being a good place to work and to live. Consistently, the State's unemployment rate has lagged the nation's, and Virginia is known to be a State with an enviable quality of life for those who live here.

Finally, I have always believed that government should conduct its affairs in a manner designed to insure the greatest good to the people, and if it could do no good by its actions, it should at least insure that it do no harm.

It would be tragic if, by hasty action now, we miss the opportunity to insure that Virginia continue to be a State where people—who are, in the final analysis, the

chief concern of all of us—can continue to live and work with the economic and personal satisfactions presently enjoyed.

Mr. ROE. Please proceed.

TESTIMONY OF HON. DAN DANIEL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF VIRGINIA

Mr. DANIEL. Thank you very much, Mr. Chairman. My statement is rather lengthy and, as you have observed, without objection, I would like to submit it for the record and brief it.

Mr. ROE. No objection, so ordered.

Mr. DANIEL. Mr. Chairman, for the record, my name is Dan Daniel and I represent the Fifth District of Virginia which incorporates most of the upper Roanoke River basin on the Virginia side.

I very much appreciate not only your holding this hearing, Mr. Chairman, but also the opportunity which you have given me to appear. I might state at the outset that this is not a happy occasion for me because to withdraw 60 million gallons of water a day from the Gaston Lake will do irreparable damage, in my judgment, to southside Virginia.

To go further, I would say that it is the first step, the first long-term step toward making that area of Virginia and perhaps the area on the North Carolina side an economic wasteland.

In earlier days, the corps was accused of riding roughshod over environmental and ecological concerns. The solution at that time to every problem was to dig a ditch or build a dam. Today the attitude has turned 180 degrees, except in this one particular instance. As a matter of fact, the standards have become so rigid that in many cases it is retarding economic growth, economic development.

I think it is fair to ask why the reversal of this policy? I do not expect an answer from the corps but I do expect the corps to act in such manner as not to degrade the environment on a narrowly applicable purpose.

I share the concern of the gentleman from North Carolina, Mr. Valentine, that Colonel Hudson is not here today and I think the excuse or the reason given by Mr. Dawson is not valid for if this bill passes, although I am not a lawyer, it would be my judgment that the suit would be moot.

There is no question that the approval of this permit will affect the Norfolk and the Virginia Beach area in a very favorable way. It will result in economic expansion for that area of Virginia, but what does it do to the less developed areas of the State, to the people in the Roanoke River basin? We really do not know in the absence of an economic and environmental impact study. After the fact, as the gentleman from North Carolina said, is too late.

An adequate supply of usable water will be a continuing problem for the Commonwealth as well as for the Nation. It would seem to me that our State officials should develop a plan for the long-term distribution of water before we continue to ladle it out piecemeal. The Roanoke River Basin is a very desirable place in which to live. I have lived there all of my life and grew up near the Kerr Dam. We have a lot of retirees come into that area and settle along the shores of this lake, as well as the Gaston. These people are very concerned about the effect that this action will have and they have

gone so far as to say to me that, "Congressman, had I known that anything like this was anticipated, I would have chosen somewhere else to live rather than this area." Young people are likewise affected and they have contacted me in great numbers about what might happen to the economy as a result of this action. It seems to me, Mr. Chairman, that the most important fact has been overlooked in this action, and that is people. And I asked the corps if the interest of these in the lake area was considered. Obviously it was not.

I would like to ask them if a cost-benefit ratio study was conducted, and the answer again is no. So I strongly recommend that such be made a part of this application.

Mr. Chairman, the Roanoke River basin is not a high income area as judged by national standards. On the other hand, as economists would say, it is not at the poverty level, but our economy is being eroded. It is being eroded by a lot of the facts which affects your own State, and that is by the loss of markets for our products to foreign countries. The future of our chief cash crop is also uncertain.

Mr. Chairman, I claim in conclusion no expertise in the area of water resources. But commonsense tells me, and I hope that it will tell the members of this committee that this is too serious a matter to go forward in the absence of an economic and environmental impact statement.

Mr. Chairman, I am very grateful to you for the opportunity to present the views that the people in my district have and for your courtesy in holding this hearing this morning.

Mr. ROE. The Chair wants to thank the distinguished gentleman from Virginia for his excellent testimony, and your testimony, of course, will appear in full in the record.

I do not have any specific questions. I think you stated your case well.

Mr. DANIEL. Thank you, Mr. Chairman.

Mr. ROE. The gentleman——

Mr. VALENTINE. I do not have any questions. I just want to express my personal appreciation to Congressman Daniel. I think he has shown a lot of courage to come here today and give his testimony to assist in this endeavor. I regard him as one of the finest members of this body. Thank you, sir.

Mr. ROE. Just 1 minute, Dan.

Mr. Stangeland.

Mr. STANGELAND. Because you have lived there all your life and know the area, could you describe the topography for me, Dan?

Mr. DANIEL. Well, as would be expected, the upper reaches of my district are mountains. The Skyline Drive, for example, cuts through two of the counties in my district and then, of course, it slopes away toward the Tidewater area. This particular area in which the dam is—the lake is located is agricultural area, some small industry is now moving into the area, and that is one of my concerns. It is an area which is fairly diversified. That is why I say I am not pleading poverty. But I am concerned about the long-term effects that this project might have on that area of Virginia.

Mr. STANGELAND. How large is the Roanoke River basin drainage area upstream from the lake?

Mr. DANIEL. Upstream from the lake it is about 125 miles. There are several tributaries that flow in.

Mr. STANGELAND. How wide would that be?

Mr. DANIEL. Well, of course, where it commences, you can step across it, but it widens as it gets down to the area where I live now, and I would guess that the width of the river there is some 200 yards.

Mr. STANGELAND. What is the average annual rainfall of that area?

Mr. DANIEL. I am not certain.

Mr. STANGELAND. Maybe you could provide that?

Mr. DANIEL. I will be glad to provide it for the record. I am not certain.

[The following was received from Mr. Daniel:]

The average annual rainfall is 47.31 inches.

Mr. STANGELAND. Are there any periods of time when there is an excess amount of water in that reservoir to a point where the reservoir overflows into Gaston Lake and Gaston Lake subsequently overflows into the Roanoke for a higher river flow at certain periods of time?

Mr. DANIEL. There are some areas along the river that do flood during the spring in the South Boston-Halifax area, for example.

Mr. STANGELAND. Thank you. I have no further questions.

Mr. PACKARD. Mr. Chairman, may I follow up on this question?

Mr. ROE. The gentleman from California.

Mr. PACKARD. Is there experience in the past, Mr. Daniel, of drought in the area?

Mr. DANIEL. Oh, yes. We have had three droughts in the last 7 years. Well, to give you an indication, I live in the country, about 15 miles north of Danville, which is the largest city in my district, my well has dropped from 42 feet to 28 feet in the last 5 years. We do consider this last year was particularly bad for the crops.

Mr. PACKARD. So you have flooding conditions during part of the year and drought conditions sometimes during other parts of the year?

Mr. DANIEL. The gentleman is correct.

Mr. PACKARD. And the reservoir and the lake was to assist the entire countryside around the reservoir in controlling and managing that water, that fluctuating water supply?

Mr. DANIEL. The gentleman is correct. There were three specific purposes in filling that project. One was recreation, one was power, and the other, of course, was flood control.

Mr. PACKARD. Since its construction, have there been ongoing disputes between different localities from two different States, over the rights to power, the water rights and so forth?

Mr. DANIEL. So far as I know, Mr. Packard, there have been no disputes between the States. There have been disputes between the people and the Corps of Engineers because, in many instances, the residents of the area along the lake feel that the corps has not lived up to the regulations that were consummated when the lake was impounded. As far as I know, there has been no controversy or disputes between the two political subdivisions, the State of North Carolina and the Commonwealth of Virginia.

Mr. PACKARD. Thank you, Mr. Chairman.

Mr. ROE. Well, the Chair wants to thank the distinguished gentleman from Virginia for his very splendid testimony.

Our next witness is the Honorable James B. Hunt, Jr., the Governor of North Carolina.

Governor, we want to welcome you to the committee.

The full text of your prepared statement will appear in the record at this point.

[Statement referred to follows:]

STATEMENT OF GOV. JAMES B. HUNT, JR.

Mr. Chairman and Members of the Committee: Thank you very much for giving me this opportunity to appear before you to support the bill introduced by Congressman Walter Jones, and co-sponsored by Congressmen Steve Neal, Tim Valentine, Jim Martin, and Dan Daniel, to require an Environmental Impact Statement on the proposed diversion of water from Lake Gaston. The citizens of North Carolina are greatly concerned about this proposal to permanently divert 60 million gallons a day of water out of the Roanoke River Basin. Our state agencies have done much detailed research on this proposal. We have carefully documented our concerns.

We have shown that the diversion of this large amount of water from the Roanoke Basin will affect lake levels at Kerr Lake. We are particularly concerned about the reduced lake levels that could occur during dry periods, and could damage the use of the lake for recreation.

We have documented the effect of this proposal in reducing flows downstream from Roanoke Rapids in the Roanoke River. The project will reduce the amount of water available for striped bass spawning. The U.S. Fish and Wildlife Service has expressed its strong concern about this aspect of the project.

We have documented the effect of the project in reducing the flow of water in the Roanoke River during dry periods. This raises serious concerns about the effects on water quality, both in the Roanoke River and in the Albemarle Sound.

When the Norfolk District of the Corps of Engineers held its first scoping meeting on the permit application by the city of Virginia Beach. North Carolina outlined the need for careful environmental review of this project. We listed the items that should be studied before making a decision on the permit. The Corps of Engineers turned a deaf ear to this request.

The Norfolk District of the Corps of Engineers issued a very minimal environmental assessment on this major action. The Wilmington District of the Corps of Engineers concurred in this inadequate environmental review. During the comment period, we carefully documented our concerns about the environmental impacts of this project. I am submitting copies of our comments to your committee, for the record.

In evaluating a major water supply project, the first step is to evaluate alternative sources of water supply. The Corps of Engineers' Environmental Assessment is particularly weak in this area. We have repeatedly urged the Corps to study the possibilities of regional water sharing and incremental additions to the existing regional supplies. The Corps has continuously refused to give the alternative sources of water supply an objective review.

North Carolina has documented some increased needs for water supply in the North Carolina portion of the Roanoke Basin. We have documented future water supply needs for electric power plant cooling, industrial and municipal use, and for agricultural irrigation. The Corps of Engineers' Environmental Assessment has not even made a minimal attempt to study the long-range need for water within the Roanoke Basin and to place the proposed diversion in this context of all needs of the basin.

We are particularly concerned that the Norfolk District of the Corps of Engineers was scheduled to complete a draft of a water supply study for the southside Hampton Roads area in the same month that it issued the permit for the Virginia Beach project. The Corps of Engineers' study has been underway for many years. If done correctly, it should answer many of our questions about the pros and cons of the alternative water sources, and about the amount of water really needed in Tidewater Virginia. We are distressed that the Corps of Engineers would issue a permit on a project of this size before releasing the results of this long-awaited study to the public.

Throughout this process, both the Norfolk District and the Wilmington District of the Corps of Engineers have given every impression of partiality and haste in reaching this critical decision. North Carolina's request for an Environmental Impact Statement was ignored from the very beginning. The Norfolk District of the Corps of Engineers made its decision on granting the permit less than one working day after the close of the comment period. To us, this shows their lack of willingness to seriously consider comments by the State of North Carolina and by any other interested parties.

In my experience as Governor of North Carolina, I have had to face many difficult and controversial decisions. I have learned by experience that the best approach in these difficult cases is to bring all the facts together for examination by the public. The National Environmental Policy Act created the Environmental Impact Statement requirement just for this type of complex and controversial decision. After the facts are gathered, and the proposal has received open review and comments from people affected by the proposal, the decision-maker can make these major decisions in a very careful and considered way, with due regard for the long-range interests of all parties concerned.

In this present case, adequate study has not been given to the impacts of the project and to the alternative sources of water supply. Instead of a careful decision-making process, we have faced a hasty and careless approach by the Corps of Engineers with a total disregard for public concern. We are talking about the permanent commitment of enough water to serve a population of a half million persons. We are talking about the irreversible diversion of more water from the Roanoke Basin than is presently used by any municipal water system in either North Carolina or Virginia. To keep public confidence in government, decisions of this import must be made with more fairness and more care.

We are asking the support of this Committee and of Congress in providing a fair and objective Environmental Impact Statement on this major project. We cannot condone the closed process that has taken place to date—our request is that we examine the alternatives in the open process established by Congress under the National Environmental Policy Act.

Thank you very much for giving me this opportunity to present our viewpoint.

STATE OF NORTH CAROLINA
OFFICE OF THE GOVERNOR
RALEIGH 27611

JAMES B. HUNT, JR.
GOVERNOR

November 23, 1983

Colonel Ronald E. Hudson
District Engineer
U.S. Army Corps of Engineers
803 Front Street
Norfolk, Virginia 23510

Dear Colonel Hudson:

The State of North Carolina's comments on the Corps of Engineers' environmental assessment on the proposed Lake Gaston water supply pipeline project are attached. We have also attached comments received by the State Clearinghouse from local governments, councils of government, and others. These comments show that the proposed pipeline project would have significant effects on the human environment and that alternative sources of water have either been inadequately considered or omitted from consideration for unjustifiable reasons.

The State of North Carolina requests that the Norfolk District of the Corps of Engineers carry out a full environmental impact statement on this major federal action that will adequately document environmental impacts and objectively weigh the advantages and disadvantages of alternative sources of water. Such a major decision should not be made before the circulation to the public of an adequate environmental impact statement.

Sincerely,

James B. Hunt, Jr.
Governor of North Carolina

Rufus L. Edmisten
Attorney General

Joseph W. Grimsley
Secretary of Natural Resources
and Community Development

WRITTEN COMMENTS OF THE STATE OF
NORTH CAROLINA ON PROPOSED LAKE GASTON
WATER SUPPLY DIVERSION PROJECT UNDER
CONSIDERATION BY THE ARMY CORPS OF ENGINEERS

INTRODUCTION

On July 15, 1983, the City of Virginia Beach, Virginia on behalf of itself, the Cities of Chesapeake and Franklin, and the County of Isle of Wight submitted a permit application to the Norfolk District Office of the Army Corps of Engineers ("Corps") for a 60 million gallon per day ("mgd") withdrawal of water from the Pea Hill Creek tributary of Lake Gaston. The applicant proposes to construct a water intake structure in Pea Hill Creek and a 60-inch inside diameter concrete pipeline that would carry the water 84.5 miles from the Creek to the Red Top area of Suffolk, where the pipeline would connect with a Norfolk water pipeline. The water withdrawn from Lake Gaston would be treated in Norfolk water treatment facilities before being transported to Virginia Beach for use. The Lake Gaston pipeline project ("project") is estimated to cost at least $176 million for construction. Virginia Beach would be required to pay the Corps $773,800 annually for storage space at John H. Kerr Reservoir ("Kerr Reservoir") and to pay the Virginia Electric and Power Company ("VEPCO") $876,960 annually for the loss of hydroelectric power generation at its Gaston and Roanoke Rapids dams resulting from the project.

On August 25, 1983, the Corps held a public hearing in Lawrenceville, Virginia to obtain comments on the permit

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application. In spite of the turnout of more than 2,000 people at this hearing who expressed overwhelming opposition to the project,[1/] the Corps issued a draft Environmental Assessment ("EA") and Finding Of No Significant Impact ("FONSI") on October 11, 1983, in which the Corps preliminarily determined that it would not be necessary to prepare an Environmental Impact Statement ("EIS") for the Lake Gaston proposal. The Corps, however, deemed it advisable to hold two more public hearings on the permit application, and conducted these hearings on November 14 in Roanoke Rapids, North Carolina and on November 17 in Virginia Beach, Virginia respectively. The State of North Carolina sent high level officials to each of the public hearings to express the State's opposition to the project based upon substantial legal and environmental considerations.

The State of North Carolina hereby submits its written comments supplementing and substantiating the oral and written objections to the Lake Gaston pipeline project already presented to the Corps. On the basis of the testimony and documentary evidence before the Corps, the State maintains that the Corps may not act upon the permit application without obtaining Congressional approval for the project. Even if it could so act,

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1/ See Allegood, Corps Finds Gaston-Tidewater Pipeline Would Bring Little Environmental Harm, Raleigh News & Observer, Oct. 12, 1983; Hoke, Corps Pipeline Assessment Expected to be Favorable, Richmond Times-Dispatch, Oct. 8, 1983.

the Corps must prepare an EIS to address major environmental issues unanswered or insufficiently discussed in its draft EA, as required by the National Environmental Policy Act of 1969, 42 U.S.C. § 4321 et seq. (1970).

I.

THE CORPS CANNOT ISSUE A PERMIT FOR THE LAKE GASTON PROJECT BECAUSE ISSUANCE OF THE PERMIT CONSTITUTES A VIOLATION OF § 301(d) OF THE WATER SUPPLY ACT OF 1958

In the Water Supply Act of 1958, Congress declared that "the Federal Government should participate and cooperate with States and local interests in developing water supplies in connection with the construction, maintenance, and operation of Federal navigation, flood control, irrigation, or multiple purpose projects." 43 U.S.C. § 390b(a) (1970). To this end, Congress authorized the Corps to include storage facilities in reservoir projects planned or constructed by the Federal Government. 43 U.S.C. § 390b(b). Congress also required, however, that:

> [m]odification of a reservoir project heretofore authorized, surveyed, planned, or constructed to include storage . . . which would seriously affect the purposes for which the project was authorized, surveyed, planned, or constructed, or which involves major structural or operational changes shall be made only upon the approval of Congress as now provided by law.

43 U.S.C. § 390b(d). (Emphasis added).

Kerr Reservoir was authorized by Congress pursuant to the Flood Control Act of 1944, 33 U.S.C. § 701 et seq. (1970). Kerr Reservoir, as well as ten other water projects, were proposed in the Corps' extensive study of the Roanoke River which was presented to Congress on June 6, 1944. See Report of the Board of Engineers for Rivers and Harbors - Roanoke River, Va. and N.C., reprinted in 18 House Documents, H. Doc. No. 650, 78th Cong., 2d Sess. (1944) ("Corps Report"). This 90 page Corps Report catalogued the flood history of the Roanoke River and explained that the Roanoke River watershed contained no major flood-control reservoirs. See Corps Report at 18. The Corps concluded that the Roanoke River Basin needed facilities to control flooding, generate hydroelectric power and regulate low flows on the River, and recommended the construction of multiple purpose reservoirs with storage facilities to meet these stated needs. See generally Corps Report at 50, 56, 77, 79-81, 87-88.

While the Corps proposed that Kerr and Philpott Reservoirs be the first of 11 projects built in the area, it clearly included the Lake Gaston and Roanoke Rapids Reservoirs in its plan for comprehensive development of the region. See Corps Report at 61-71. Thus, the Kerr, Lake Gaston and Roanoke Rapids facilities were intended to be constructed for three specific purposes: flood control, hydroelectric power generation and low flow regulation. Nowhere in the exhaustive 1944 Report did the

Corps discuss or recommend using these facilities to develop municipal water supplies.

Congress authorized the construction of Kerr Reservoir solely on the basis of the Corps Report, thereby ratifying that this project, including its storage facilities, was intended to be operated for flood control, hydroelectric power generation and low flow regulation purposes. See Pub. L. No. 534, Section 20, reprinted in 1944 U.S. Code Cong. Serv. 893 (78th Cong., 2d Sess.). Subsequent to construction of Kerr Reservoir, the Gaston and Roanoke Rapids dams were built by VEPCO, consistent with the 1944 Corps Report, for the purpose of generating hydroelectric power. These facilities are also operated to accommodate the flood control and low flow augmentation purposes of Kerr Reservoir.[2/]

2/ VEPCO's license from the Federal Power Commission (now the Federal Energy Regulatory Commission ("FERC")), to construct and operate Gaston and Roanoke Rapids Reservoirs required VEPCO to assist in the protection of the striped bass fishery during migration and spawning period. To this end, VEPCO entered into a Memorandum of Understanding with the Corps and the North Carolina Wildlife Resources Commission to assure that VEPCO releases water during April, May and June each year as well as reregulates water discharged from Kerr Reservoir. See Memorandum of Understanding Between Virginia Electric and Power Company and U.S. Army Engineer District, Wilmington Corps of Engineers and North Carolina Wildlife Resources Commission for Reregulation of Augmentation Flows For Fish From John H. Kerr Reservoir, Section 3 (1971). The following year, VEPCO signed another Memorandum of Understanding with the Corps, consistent with its obligations to operate the Gaston and Roanoke Rapids facilities according to Corps' requirements for flood control. By the terms

(Footnote Continued)

The Lake Gaston pipeline project would require the reallocation of storage facilities and storage functions at Kerr Reservoir. This reallocation has no relation to any of the three original purposes for which Kerr Reservoir was built. Under these circumstances, the reallocation constitutes a significant modification of the original purposes of the reservoir, which, under the express mandate of the Water Supply Act of 1958, requires Congressional approval.3/ See 43 U.S.C. § 390b(d).

The reallocation of storage facilities at Kerr Reservoir would have a serious effect upon the generation of hydroelectric power there, based upon Virginia Beach's own cost estimates. The Phase I Report prepared by Virginia Beach's engineering consultant, C.E. Maguire, Inc., estimates that in order to meet

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(Footnote Continued)

of this Memorandum of Understanding, VEPCO also agreed to rerelease waters from these projects to insure that minimum flow requirements are met and that reservoir levels are maintained at the desired elevations. See Memorandum of Understanding, Corps of Engineers and Virginia Electric and Power Company Concerning Operation of Gaston and Roanoke Rapids Projects For Flood Control, Sections 1 and 5 (March 1972).

3/ Although Thomas H. Muehlenbeck, City Manager of Virginia Beach, argued at the November 17 public hearing that reallocations of less than 50,000 acre feet are exempt from the requirement of obtaining prior Congressional authorization, this assertion has no basis in law. The Corps' internal operating procedures recognize that reallocation of reservoir storage facilities that has a significant effect on other authorized purposes requires Congressional approval, regardless of the size of the reallocation. ER 1105-2-20, Section 7-3(b) allows the Commander of the Corps to allocate 50,000 acre feet to storage serving municipal or industrial water supply only if the criteria of § 390b(d) of the Water Supply Act are not violated.

the downstream flow requirements of the Roanoke River Basin that would exist due to an annual withdrawal of 60 mgd of water from Lake Gaston, Virginia Beach would be required, each year, to pay the Corps "the higher of either benefits or revenues foregone [in this case, $593,180 or $127,460 respectively], or the cost of storage in the Federal project [in this case, $773,800]." See Phase I Study - Roanoke River Basin Water Resource Development Plan, Table 11 at p. 41 (October 1982).

The reallocation of storage facilities at Kerr Reservoir would also have a serious effect on low flow regulation, whether the maximum withdrawal were 60 mgd or greater.[4/] Releases of water from Kerr Reservoir are critically important to the preservation of striped bass migration and spawning and the withdrawal of 60 mgd of water from Lake Gaston would in most

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4/ In spite of the fact that, according to the remarks of Richard Burton at the November 17 public hearing, Virginia Beach has requested the Virginia State Water Control Board to amend its Section 401 certification of the Lake Gaston project to authorize only up to 60 mgd withdrawals, there is no evidence that such amendment has occurred nor that the pipe intended for use cannot transport more than 60 mgd. C.E. Maguire, Inc. itself has admitted that the pipeline would contain pressures "generally less than 300 psi." See Memorandum of Thomas M. Leahy, P.E. To Aubrey V. Watts, Jr. Dated May 5, 1983 regarding May 4, 1983 Workshop for the Lake Gaston Environmental Assessment at 2. According to analysis of pipeline capacity conducted by the Office of Water Resources in the North Carolina Department of Natural Resources and Community Development, the proposed Lake Gaston pipeline could carry over 100 mgd if the pipe is specially constructed for high operating pressures. Before issuing a permit for the project, the Corps must analyze the ramifications of using a pipeline designed with such capacity.

cases result inthe shortening of the duration of such releases in the critical period. Moreover, further reduction in capacity for low flow regulation at Kerr Lake would also increase the adverse impact on water quality in the lower Roanoke River Basin.

Apart from the consequences to Kerr Reservoir, the Gaston and Roanoke Rapids facilities would be seriously affected by the proposed pipeline in their hydroelectric power generation activities. The Phase I Report issued by C.E. Maguire, Inc. estimates that Virginia Beach will be required to pay VEPCO $876,960 annually for the loss of generation at both dams. See Phase I Study - Roanoke River Basin Water Resource Development Plan at 42-43. This compensation figure reflects the magnitude of the effect on Gaston and Roanoke Rapids Reservoirs over the next 50 years.

For all the reasons set forth above, the State of North Carolina submits that the Corps cannot issue a permit for the Lake Gaston pipeline project without prior Congressional authorization, because to do so would be to allow modifications to Kerr Reservoir, a federally authorized project, that would seriously affect the purposes for which such project was originally constructed, as well as the related functions of Gaston and Roanoke Rapids Reservoirs.

II.

EVEN IF THE CORPS COULD ISSUE A PERMIT WITHOUT OBTAINING CONGRESSIONAL AUTHORIZATION, IT MUST PREPARE AN EIS IN THIS CASE UNDER ITS OWN REGULATIONS BEFORE DETERMINING WHETHER TO ISSUE A PERMIT

Corps regulations require the preparation of an EIS where a proposal involves the operation of a dam and lake project or where the proposal would result in significant changes in the management of project resources. See 33 C.F.R. § 2306(d). As Section I of these Comments amply demonstrates, the Lake Gaston pipeline proposal would involve the operation of three dam and lake projects in Virginia and North Carolina, one of which is managed by the Corps itself and the remaining two of which are controlled by Corps policy (pursuant to the legislative history of the Roanoke River Basin development plan as well as the terms of FERC's licenses for these facilities). The Lake Gaston proposal would clearly result in significant changes in the management of the water resources in Kerr, Gaston and Roanoke Rapids Reservoirs to insure that necessary flood control, hydroelectric power generation and low flow augmentation functions are not impeded by the projected withdrawals. Thus, under the express language of 33 C.F.R. § 2306(d), the Corps must prepare an EIS for the Virginia Beach proposal.

III.

THE CORPS MUST PREPARE AN EIS BECAUSE ITS DRAFT EA AND FONSI DO NOT FULLY ADDRESS THE SIGNIFICANCE OF THE LAKE GASTON PROJECT NOR THE ADVERSE IMPACTS ASSOCIATED THEREWITH

The Corps is required to consider both the context of a project and the intensity of the impacts in order to determine whether the effect of the project on the human environment will be "significant." 40 C.F.R. § 1508.27. In its draft FONSI, the Corps merely cited Virginia Beach's environmental report in applying the intensity factors and did not consider the context of the proposal as mandated by 40 C.F.R. § 1508.27(a).

A. Virginia Beach's permit application is unquestionably precedential because of the size of the water withdrawals contemplated by the project.

The Corps preliminarily determined that the Lake Gaston proposal would not establish a precedent for future actions with significant effects. See draft FONSI at (6). In its draft EA, the Corps attempted to justify its position by stating the following:

> . . . This project would not create a precedent for withdrawing water from the 3-lake system as the towns of Henderson, Clarksville and Roanoke Rapids already withdraw water. Nor would interbasin transfer in the Roanoke basin be a precedent: the City of Roanoke and the Town of South Hill presently draw water from other basins and discharge into the Roanoke basin, and Oxford, North Carolina draws water through Henderson from Kerr and discharges it into the Tar River basin . . .

Although it is true that the municipalities cited presently withdraw water from Kerr Lake and Roanoke Rapids Lake, the withdrawals are minute in comparison to the 60 mgd or more contemplated by the Lake Gaston diversion. Henderson, Oxford and the Soul City complex use an average of approximately 5.3 mgd from Kerr Lake, of which only about 1 mgd is discharged out of the basin. Clarksville uses an estimated 250,000 gallons of water per day from Kerr Lake and discharges ba ' into the same Lake. The City of Roanoke Rapids uses an average of 3.6 mgd from Roanoke Rapids Lake and discharges back into the River at Weldon, North Carolina.

The quantity of water Virginia Beach seeks to withdraw from Lake Gaston, none of which will be returned to the River, is almost 60 times the amount of the combined daily net withdrawal of the municipalities referenced above. Thus, it is inappropriate to rely upon these small withdrawals of water from the Roanoke River to claim that Virginia Beach proposal is based on precedent. The same is true with respect to the interbasin transfers engaged in by the City of Roanoke and the Town of South Hill in Virginia and the Town of Oxford in North Carolina.[5/]

5/ The City of Roanoke diverts water from Catawba Creek in the James River Basin to Cove Creek Reservoir in the Roanoke River Basin. The five year average for these diversions, however, is 2.76 mgd for the years 1978 through 1982. The Town of South Hill

(Footnote Continued)

The Lake Gaston project, if approved by the Corps, would establish a precedent for future major water withdrawals, both by Virginia Beach itself through amendment of its permit, and by other municipalities that find themselves in need of an additional water supply in the years to come. It is disingenuous for the Corps to claim that a decision on this permit application will not "prejudice" decisions on future applications. The Corps is well aware that several municipalities have already expressed an interest in applying for additional water on the basis of Virginia Beach's proposal. These municipalities undoubtedly would rely upon the Corps' proposed resolution of this application in stating their needs at some future date. Thus, the Corps should prepare an EIS because of the precedential nature of the proposed withdrawal. The fact that future applications may be considered on their merits does not lessen the precedential nature of the project at hand.

B. The Corps erroneously assumed in its draft EA and FONSI that no environmental protection laws would be violated by the Lake Gaston project.

In concluding that "[n]o environmental protection laws are expected to be violated due to this project," the Corps

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(Footnote Continued)

withdraws an average of approximately 0.6 to 0.7 mgd from the Meherrin River and discharges its treated wastewater into Flat Creek which flows into the Roanoke River downstream from Kerr dam. The Town of Oxford discharges approximately 1.1 mgd into the Tar River Basin. See text at p. 11, supra.

ignored the existence of longstanding state law in both North Carolina and Virginia regarding the protection of riparian rights. This common law position developed from a concern to protect the environment by conserving water resources within each river basin. It must be addressed by the Corps in the preparation of an EIS.[6/]

A riparian owner is entitled to make "reasonable" use of water on his land, provided that the user does not injure the similar right of the downstream riparian owner. Bruton v. Carolina Power & Light Co., 217 N.C. 1, 6 S.E.2d 822, 827 (1940) (quoting Dunlop v. Carolina Power Company, 212 N.C. 814, 195 S.E. 43, 46 (1938)); Smith v. Town of Morgantown, 187 N.C. 801, 802-03, 123 S.E. 88 (1924); Town of Purcellville v. Potts, 179 Va. 514, 19 S.E.2d 700, 702-03 (1942); Virginia Hot Springs Co. v. Hoover, 143 Va. 460, 467, 130 S.E. 408 (1925). Unreasonable uses of water by an upper riparian owner that diminish the water available to a lower riparian owner may be enjoined. See, e.g., Saunders v. Bluefield Water Works & Imp. Co., 58 F. 133, 139 (W.D. Va. 1893); Walton v. Mills, 86 N.C.

6/ Although the Corps has stated that "the primary responsibility for allocating water quantities rests with the states," it cannot ignore that the practical effect of issuing this permit will be to allocate water quantities between North Carolina and Virginia, in the absence of any agreement between them and contrary to the riparian doctrine. See Regulatory Guidance Letter 82-5, Permit Conditioning for Minimum In-stream Flows, April 20, 1982.

277, 278-81 (1882); Town of Purcellville v. Potts, 19 S.E.2d at 704; Town of Gordonsville v. Zinn, 129 Va. 542, 562, 106 S.E. 508 (1921); Carpenter v. Gold, 88 Va. 551, 553-55, 14 S.E. 329 (1892).

A riparian owner does not have the right, however, to divert water beyond his riparian property or beyond the watershed. Town of Purcellville v. Potts, 19 S.E.2d at 703; Town of Gordonsville v. Zinn, 129 Va. at 562-63. A fortiori, a nonriparian owner does not even have the right to "reasonable" use of riparian water. If a nonriparian's use of water causes any ascertained injury to a downstream riparian owner, the downstream owner can enjoin the nonriparian's water use.

It is well established that municipal diversion of water for public water supply purposes is a nonriparian use. See Pernell v. City of Henderson, 220 N.C. 79, 16 S.E.2d 449, 451 (1941); Town of Purcellville v. Potts, 19 S.E.2d at 703. The Pernell court observed:

> The exigencies involved in supplying its inhabitants with water does not confer on the city an exonerating preference over the lower riparian owner who desires to use the water for purposes of manufacturing.

16 S.E.2d at 451; accord Town of Purcellville v. Potts, 19 S.E.2d at 703. As a result, if the municipal diversion causes any injury to a downstream riparian owner, that diversion can be

enjoined. In the case of the Lake Gaston project, Virginia Beach is a nonriparian diverting water to the injury of downstream riparian owners in the Roanoke River Basin. Thus, the proposed withdrawal of water would violate the riparian doctrine in both North Carolina and Virginia.

Interbasin transfers of water constitute, by definition, diversions of water beyond riparian property. In view of the fact that such diversions violate the riparian doctrine, interbasin transfers are deemed unlawful at common law. See Opinion of the Attorney General of the Commonwealth of Virginia to the Honorable Thomas J. Rothrock, April 25, 1972 (citing Virginia law).

Should the Lake Gaston project go forward, the State of North Carolina maintains that the riparian interests of its citizens would suffer actual injury at the hands of a nonriparian. The Corps must, therefore, prepare an EIS in this case to analyze the impacts this project would have upon riparian rights protected by common law, in both North Carolina and Virginia, for the benefit of the riverine environment.

C. The Corps ignored evidence of significant adverse environmental effects upon Pea Hill Creek and nearby Lake Gaston, Kerr Lake, the Roanoke River downstream from Roanoke Rapids Lake, and Albemarle Sound.

To the extent that the Corps attempted to determine the intensity of the project's effect on the human environment, it

failed to appreciate the importance of record testimony and documentary evidence. There are four geographic areas where the Lake Gaston project is likely to cause substantial adverse impacts:

> (1) the area surrounding Pea Hill Creek and nearby Lake Gaston where the intake would be constructed;
>
> (2) the area surrounding Kerr Lake;
>
> (3) the area downstream from Roanoke Rapids Lake; and
>
> (4) Albemarle Sound, where the Roanoke River and the Chowan River flow together.

1. Impacts On Pea Hill Creek and Nearby Lake Gaston

a. Recreational and Developmental Future of the Area. During his presentation at the November 17 public hearing, Aubrey Watts, Director of Public Utilities for the City of Virginia Beach, noted that, in 1977, an intake structure was suggested one mile north of its current proposed location in Pea Hill Creek. The location was changed because of great interest in the recreational use of the area, according to Watts. The interest in recreational, as well as general developmental, use of the water and land surrounding Pea Hill Creek at the proposed site of the intake structure is no less intense than at the previously suggested location.

Virginia Beach's own environmental report concedes that the area surrounding Pea Hill Creek "is currently under heavy development pressure." Lake Gaston Water Supply Project Environmental Report at 26 (July 1983). While terming the adverse impact of the project on real estate development in this area "temporary," Virginia Beach recognizes the need to control sources of point and nonpoint pollution that would affect the water quality at the site of the intake structure. Id.

Virginia Beach's concern over pollution of drinking water in the future would undoubtedly restrict the use of septic tanks and of agricultural pesticides and herbicides. Additional water quality controls would include restrictions on the installation of package sewage treatment plants, restrictions on the total amount and density of development, and limitations on the location of particular types of businesses in the watershed area. Nutrients from agricultural and forest land in the area would also have to be controlled to combat drinking water pollution. Each of these restrictions would directly inhibit recreational development and agricultural use of the land around Pea Hill Creek and nearby Lake Gaston.

b. Water Quality Considerations. Hydrology and aquatic life could also be significantly affected in the waters of Pea Hill Creek due to the proposed withdrawals. While Virginia Beach and the Corps have asserted that the withdrawal of 60 mgd would have a minimal impact upon fish larvae, the pipeline

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proposed could carry substantially more than 60 mgd if necessary or desired. The Corps never considered this possibility in its draft EA and, thus, should analyze the potential for adverse impact upon aquatic life attributable to an increased withdrawal.

2. Impacts on Kerr Lake

The Corps to date has ignored the serious injury to Kerr Lake that is likely to occur due to further reductions in its water level. Virginia Beach itself estimates that the drawdown might be increased by as much as 1.2' as a result of a withdrawal of 60 mgd from Lake Gaston.[7/] Water-based recreational facilities would certainly be jeopardized by any additional drawdown, given existing low water levels experienced over the past 11 years.

In 1982, 1.3 million visitors used the recreational facilities along the Nutbush Creek arm of Kerr Lake that are operated by the State of North Carolina. The economic impact on local service businesses of this amount of tourism is quite sizeable. A relatively small decrease in the lake level at Kerr Lake has a critical impact upon the use of boating facilities operated by the State and by private interests. During the

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7/ The State of North Carolina has been unable to obtain detailed information from the Corps of Engineers as to its calculations of the additional drawdown caused by the proposed Virginia Beach withdrawal.

summer season, the Corps has set a target elevation of 299.5 feet for Kerr water levels to insure full enjoyment of the recreational facilities. The target elevation declines to 295.5 feet in the fall and winter months. This level is also considered the minimum lake level acceptable to the Corps year round.

While an elevation of 295.5 feet is the desired minimum water level, in eight of the past 11 years, the Corps has failed to maintain this level. In three of the past 11 years, the water level has been below 293 feet, which is the lowest level contemplated under Corps policy before the Corps reduces water releases for hydroelectric power. As Secretary Joseph Grimsley, of North Carolina's Department of Natural Resources and Community Development, testified on November 14, when the water level at Kerr Lake drops to 295 feet only seven of the 16 boat ramps operated by the State of North Carolina can be used for all types of water craft. Five of the ramps can be used only by small boats, and the remaining ramps are only marginally usable. When the water level is lowered to 294 feet, only six of the 16 ramps can be used by all boats, one other ramp can be used only by small boats and the remaining nine ramps are at best marginally operable. At a water level of 293 feet, the nine marginally

operable ramps become essentially inoperable. See Testimony of Joseph W. Grimsley, November 14, 1983, at T.R.R.62.[8/]

Lowered lake levels at Kerr Lake not only restrict use of ramps but also present a serious hazard to boaters, swimmers, and water skiers on the lake. At a lake level of 295 feet or lower, sandy shoals are exposed at Henderson Point, and swimming and beach use become impracticable there as well as at Kimball Point, Satterwhite Point and Hybernia Park due to the exposure of a 100 foot wide barrier of sticky muck between the normal shoreline and the water's edge.

3. Impacts on the Roanoke River Downstream From Roanoke Rapids Lake

a. Reduction in Water Releases Required to Protect Bass Fishery. The pipeline project would have adverse effects beyond Lake Gaston and Kerr Lake. The aquatic resources of the Roanoke River Basin downstream from the Roanoke Rapids dam would be damaged by at least a one to two day reduction in water releases that aid bass migration and spawning. The draft EA concluded that "[a] two percent loss in potential spawning once every four years is not considered significant, nor is a four percent loss once every 25 years." Draft EA at 6.

8/ "T.R.R." references are to the transcript of the public hearing at Roanoke Rapids, North Carolina.

This determination is not supported by the opinions of government environmental experts in the National Marine Fisheries Service within the United States Department of Commerce, the United States Environmental Protection Agency, and the Fish and Wildlife Service within the United States Department of Interior. See, e.g., Letter from Ruth Rehfus to Colonel Ronald E. Hudson dated October 14, 1983; Letter from Greene A. Jones to District Engineer, Norfolk Division, Corps of Engineers dated September 15, 1983; and Letter from Glenn Kinser to Colonel Ronald E. Hudson dated September 6, 1983. Each of these communications to the Corps expresses grave reservations about the impact of the Lake Gaston project upon the bass fishery and urges further study of the problem by the Corps as well as by Virginia and North Carolina. The opinions of these experts alone should compel the Corps to prepare an EIS addressing this matter.

b. Effects of Reductions on Downstream Flow of Roanoke River. Downstream low flows in the Roanoke River Basin are likely to be significantly affected by the additional withdrawal of 60 mgd of water upstream at Lake Gaston. The daily withdrawals are estimated to cause an average reduction of 1.2% in the flow of the Roanoke River, which could jeopardize water quality in the lower portion of the River. This reduction could hinder agricultural use and industrial growth in counties along the River, since there would be less water available to accommodate any greater demands upon or discharges into the

River.[9] During critically dry periods, the River's flow might be lowered by as much as eight and one-half percent[10] or more.[11]

c. Irrigation Needs of Lower Roanoke River Basin. Future agricultural requirements in the lower Roanoke Basin will be tremendous. This is documented in a 387 page report, Projected Irrigation Water Requirements for Northeast North Carolina Above Cape Lookout for the Year 2020, by Dr. Ronald Ernest Sneed, water management specialist, North Carolina Agriculture Extension Service, which was funded in part by the

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9/ For instance, as the City Attorney for Roanoke Rapids testified at the November 14 public hearing, there is a real possibility that Champion International Paper Company will build a plant on the southside of the Roanoke River in Halifax County provided that the available water resources in the proposed location can meet the needs of the plant. See Testimony of Lunsford Crew, November 14, 1983, at T.R.R.85. Clearly, a billion dollar capital investment such as that contemplated by Champion International will not be made if water from the Roanoke River, otherwise required to meet water quality standards, is diverted out of the Basin. Id. at 85-86.

10/ See Comments of North Carolina Department of Natural Resources and Community Development to Army Corps of Engineers, September 2, 1983.

11/ For example, based on hydrologic conditions recorded in 1954, the North Carolina Office of Water Resources model showed that the flow dropped from 2,120 cfs to 1,500 cfs when the elevation at Kerr Reservoir reached 293 feet. Without the 60 mgd withdrawal, the elevation of 293 feet would not have been reached and the lowest flow would have been 2,120 cfs. Thus, the flow was reduced by about 30% as a result of the 60 mgd withdrawal.

U.S. Army Corps of Engineers.[12/] According to Dr. Sneed's testimony at the Roanoke Rapids public hearing, in the seven-county area of North Carolina, through which Roanoke River Basin's waters flow, there are approximately 2,234,000 acres of land. In 1981, 690,000 acres of cropland with active double-cropping produced 730,000 acres of crops worth $332 million. See Testimony of Ronald Sneed, November 14, 1983, at T.R.R.79. Twenty-five thousand five hundred acres of cropland, or three and one-half percent of all the region's cropland, were irrigated in 1981. A significant expansion in irrigation has occurred over the past five years, and it is likely that growers of corn and peanuts, who have enjoyed much greater yields from irrigated lands, will accelerate this development.

By the year 2020, if only half the potential acreage is irrigated in these seven counties, there will be 350,000 acres under irrigation. At one-half acre per foot of water for this acreage, the irrigation demand translates into 175,000 acre-feet of water for agricultural purposes. Almost 86 percent of demand for irrigation occurs in July, August and September, according to Dr. Sneed. At peak demand in August, if only half of the

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12/ The study included analysis of irrigation needs for four of the seven counties in the Roanoke River Basin in the years 1995 and 2020. In the year 1995, 383,000 acres of land in Bertie, Hertford, Northampton and Washington Counties will have the potential for irrigation. For the year 2020, this estimate increases to 442,000 acres.

withdrawals for irrigation were taken from stream water, which is the current ratio, the lower Roanoke River Basin localities would require approximately 375 mgd to meet their agricultural needs. Id. at 81.

The foregoing considerations clearly require the preparation of an EIS to consider the likely impact of flow reductions upon water quality, fisheries, agricultural use and industrial growth in the lower Roanoke River Basin and, in light of the projected demands for agriculture alone, the effect of such demands on the operation of Kerr Reservoir and on minimum flow requirements at the Roanoke Rapids dam.

4. Impacts on Albemarle Sound

Finally, and perhaps most critically, the draft EA did not even address the panoply of potential environmental effects upon Albemarle Sound at the confluence of the Roanoke and Chowan Rivers.[13/] The diversion of waters from the Roanoke River out of the Roanoke River Basin would certainly affect the Sound and its supply of freshwater inflows. The Corps must analyze impacts such as the following:

13/ The Wilmington District of the Corps advised the Norfolk District in August to consider and discuss in the EA the effects of the Lake Gaston water withdrawal on salinities and trophic conditions in the Sound, but this advice was not heeded. See Letter from Wayne A. Hanson to Commander, U.S. Army Engr. Dist.

(Footnote Continued)

-- changes in the frequency, quantity and duration of low flows in the Roanoke River and their effect on water quality in the River and in Albemarle Sound;

-- changes in retention times in Kerr Lake, Lake Gaston and Roanoke Rapids Lake and how these will affect settling of suspended solids and sediments in the water, and their related effect on water quality in the Roanoke River and Albemarle Sound;

-- changes in frequency and duration of minimum flow releases from Roanoke Rapids Lake and the effect of such changes on water quality and marine life in the Roanoke River and Albemarle Sound;

-- changes in allowable assimilative capacity of existing and proposed discharges in North Carolina, which will change in response to the quality of water released from Roanoke Rapids Lake;

-- changes in salinity in Albemarle Sound on a long-term basis due to net reduction in total flow of fresh water into the Sound, and how the change in salinity will affect the incidence and frequency of algae blooms; and

-- changes in dilution of Chowan River pollutants by the diminuation of Roanoke River water and associated effects of such reduction on water quality in Albemarle Sound.

Impacts to the aquatic ecology of the lower Roanoke River and Albermarle Sound cannot be measured merely in percentage reductions in flows in the Roanoke River on an average basis. Hydrology within the drainage area changes from a riverine to an estuary to a coastal system and thereby determines the character

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(Footnote Continued)

Norfolk and Norfolk Harbor dated August 22, 1983 regarding Virginia Beach - Lake Gaston Water withdrawal (83-0747-06) at 2.

and variability of this ecological system. The hydrology of the system has been altered in the past by the construction and operation of the Kerr, Gaston and Roanoke Rapids dams, to which changes the River and the Sound have adapted. The imposition of any additional change on that hydrology would have significant ecological implications for the system, which the draft EA failed to address. The Corps must do so in an EIS which takes ito account the interrelationship between the Roanoke River and Albemarle Sound.

5. The Foregoing Effects Are Cumulatively Significant

The diverse and substantial adverse impacts described above in all four areas must be considered cumulatively by the Corps. These effects are clearly important enough to require the preparation of an EIS for the Lake Gaston project even if, arguendo, any one of them were not significant standing alone. Remarkably, the draft EA concluded that the project would not involve an irreversible or irretrievable commitment of resources, because "unless water is chemically altered or permanently isolated, it remains part of the hydrologic cycle." If this argument were followed, the entire flow of the Roanoke River could be diverted to Tidewater Virginia and there would still be no permanent commitment of resources! This absurd conclusion shows that the Corps has failed to deal adequately with the effects issue. The project would in fact irreversibly and irretrievably remove enough water from the Roanoke River Basin to

support over half a million persons. The future shock of such a removal of resources on the human environment in that Basin should be documented in an EIS.

D. The Corps conceded that the proposed project is "highly controversial," yet erroneously discounted the relevance of that fact to an analysis of the project's effects on the quality of the human environment.

The significance of the impact of the project is apparent from the public outcry over its proposal. Essentially unanimous views in opposition were expressed at the Lawrenceville and Roanoke Rapids public hearings by officials from all levels of government, as well as representatives from the broadest range of community interest groups.[14/] Contrary to the assessment of the Corps in its draft FONSI, this project cannot be characterized as being opposed only by individuals with unfounded fears of "catastrophes."

At the Lawrenceville hearing, the Corps heard from 49 witnesses, 46 of whom opposed the project. Among these opponents were such government officials as a spokesman for a United States Senator, one United States Congressman and spokesmen for two other Congressmen, an emissary from the Governor of North Carolina, five mayors or their representatives, one assistant

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14/ The transcript of the Virginia Beach public hearing was not available for review prior to the deadline for submitting these comments.

county administrator, one planning commission representative, four state legislators representing counties in both Virginia and North Carolina, and four members of county boards of commissioners or town councils. Non-government opposition was expressed by spokesmen for chambers of commerce, natural resource conservation groups, aquatic protection organizations and real estate associations.

At the Roanoke Rapids hearing, the Corps heard from 56 witnesses, 50 of whom opposed the project. One United States Senator appeared before the Corps at this hearing in opposition to the proposal, as did a staff member of another Senator, one United States Congressman, staff assistants to two other Congressmen, the Attorney General of North Carolina, the Secretary of the North Carolina Department of Natural Resources and Community Development, representatives of the North Carolina former Secretary of Commerce and of the North Carolina Commissioner of Agriculture, two state Senators, five state Representatives, one City Attorney, five county commissioners, one representative of a sanitary district board, four mayors, two county managers or administrators, two members of town or city councils, a superintendent of a school district, one county health director, a representative of a governmental wildlife commission and a spokesman for a county committee to conserve water resources. Non-governmental groups heard to oppose the project in Roanoke Rapids included boards of realtors, chambers of commerce,

community preservation associations and area development committees.

Thus, it is clear that the controversy over this project spreads over a broad spectrum of interest groups. The issue is considered highly significant by a large number of public officials speaking on behalf of sizable constituencies. Notwithstanding the Corps' assertion, the adverse impacts described by persons at the Lawrenceville and Roanoke Rapids hearings are not imaginary, in light of the knowledge of these witnesses and their standing in their communities.

The Corps is by law required to consider that the Second Congressional District in North Carolina has been plagued by low water levels at Kerr Lake that have "drastically hindered recreational use." See Testimony of Congressman Tim Valentine, August 25, 1983, at T.L.30. 15/ The Corps cannot ignore evidence that the withdrawal of water will affect the use of land adjoining Lake Gaston as to septic systems and pesticides employed in agricultural operations. See Testimony of Delegate Beasley Jones, August 25, 1983, at T.L.58; see also Testimony of

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15/ "T.L." references are to the public hearing conducted in Lawrenceville, Virginia. See also Testimony of Representative John Church, November 14, 1983, at T.R.R.72-73; Testimony of John D. Haywood, November 14, 1983, at T.R.R.143-44; and Testimony of David J. Mitchell, November 14, 1983, at T.R.R.153-55.

Mayor Mason Hawfield, November 14, 1983, at T.R.R.110. There is also ample evidence in the record to substantiate concerns over declining property values in Mecklenberg and Brunswick Counties, Virginia, around Kerr Lake and Lake Gaston, respectively, due to prospective impacts on recreational development and use. See Testimony of Bobby Ford, August 25, 1983, at T.L.108; see also Testimony of Scott Peace, November 14, 1983, at T.R.R.125-27; Testimony of Alvis P. Fleming, November 14, 1983, at T.R.R.130.

The Corps cannot disregard the very real curre nd future need of the lower Roanoke River Basin for water o irrigate farmlands that help sustain the economy of the region. See Testimony of Dr. Ronald Sneed, November 14, 1983, at T.R.R.79-82[16/]. Nor can the Corps ignore the significant evidence of a threat to the industrial development of the lower Roanoke River Basin. See Testimony of Lunsford Crew, November 14, 1983, at T.R.R.85[17/]. Finally, the Corps must acknowledge that the proposed withdrawals from Lake Gaston would affect the flow and quality of waters in the lower Roanoke River,

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16/ See also Testimony of Senator Julian Allsbrook, November 14, 1983, at T.R.R.78; Testimony of Henry B. Winslow, November 14, 1983, at T.R.R.88; Testimony of Randy Britton, November 14, 1983, at T.R.R.99; Testimony of Alvis P. Fleming, November 14, 1983, at T.R.R.129.

17/ See also Testimony of Charles Fitts, November 14, 1983, at T.R.R.89 and 90; Testimony of Stuart Taylor, November 14, 1983, at T.R.R.96-97; Testimony of Rosaline Willard, November 14, 1983, at T.R.R.105.

thereby altering aquatic conditions for fish. See Testimony of Alton Elmore, November 14, 1983, at T.R.R.100-01[18/].

For all these reasons, the Corps must prepare an EIS to analyze existing and likely future adverse impacts from the Lake Gaston project.

E. The Corps has failed to address the indirect, and adverse, effects the proposal will have on Tidewater Virginia.

In ascertaining the potential severity of a project's impact, the Corps is required to analyze its indirect effects, including "growth inducing effects . . . and related effects on air and water and other natural systems." 40 C.F.R. § 1508.8(b). No such analysis is included in the draft EA. Instead, the Corps has simply parroted Virginia Beach's claim that its projected growth will occur regardless of water availability. Since applicant's projection of growth assumes an unlimited water supply, its assertion cannot withstand analysis. Under this rationale, no project to increase a water resource would ever have a growth inducing effect. The draft EA contained neither a population projection based on Virginia Beach's existing water supply, nor an objective appraisal of the growth which would be

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18/ See also Testimony of Lunsford Crew, November 14, 1983, at T.R.R.86; Testimony of Vernon Bevill, November 14, 1983, at T.R.R.112.

induced by the proposed pipeline. The requirement for such a detailed analysis clearly mandates the preparation of an EIS.

IV.

IN PREPARING AN EIS THE CORPS MUST GIVE SERIOUS CONSIDERATION TO THE ALTERNATIVE OF A REGIONAL SOLUTION TO THE TIDEWATER WATER SUPPLY PROBLEM

Throughout the November 17 public hearing, witnesses in Virginia Beach admitted that there is no water shortage in Virginia, but merely a water management problem in the Commonwealth. Witness after witness called for a regional solution to the water supply problem in Tidewater Virginia. The State of North Carolina concurs with these witnesses and also with the opinions of experts who call for regional cooperation as the answer to respond to Southeastern Virginia's water needs. See, e.g., "Institutional Issues Affecting Water Supply Development: Illustrations from Southeastern Virginia," (Virginia Water Research Center, Bulletin 138, March 1983).

Virginia Beach never discussed in its environmental report the alternative of regional sharing among the eight existing water supply systems in the Tidewater area. The Corps summarily dismissed this alternative in its draft EA based largely upon the fact that it does not "satisfy the City's desire for an autonomous source" of water. See draft EA at 12. It is hypocritical to talk of autonomy on the one hand, yet call for the withdrawal of 60 mgd from Lake Gaston, the major portion of

which lies in the State of North Carolina. Moreover, it is unclear how "autonomous" a water source the project actually is when Virginia Beach must still rely upon cooperation with Norfolk in treating the water transported from Lake Gaston before it would be suitable for drinking in Virginia Beach.

In any event, an alternative such as the eight water system regional approach cannot be ignored merely because it would require cooperation and sharing of existing supply among neighboring Tidewater Virginia communities. As Dr. Earl Droessler testified at the November 17 public hearing, implementation of this alternative would require no significant construction of new facilities and would make the best use of existing water resources in that area. The Norfolk District of the Corps projected last year that the combined water supply demands on the eight water systems in Southeastern Virginia by the year 2030 will be 139.2 mgd. The Corps, engineering consultants and utility directors all concur that the safe yield for these water systems is 124.1 mgd, even excluding approximately 56 mgd of existing groundwater capacity in five of these systems. The safe yield totals, therefore, only fall short of projected water demands in the year 2030 by approximately 15.1 mgd, without reference to the 56 mgd of groundwater capacity.

Several new water options are readily available at low cost to meet and exceed this shortfall. Minor modifications to Norfolk's intakes and reservoirs could provide an additional

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supply. Limited industrial re-use of treated wastewater for non-potable purposes could reduce overall water demand.[19/] Finally, voluntary water conservation and reduction of waste not only in Virginia Beach, but throughout the region's eight water systems could further reduce demand. These three inexpensive, easily implemented options together could yield at least 30 mgd, almost double the predicted shortfall to meet year 2030 demand in Southeastern Virginia. Moreover, use of groundwater from existing wells to supplement surface water sources during drought periods is an obvious additional option not adequately addressed by the Corps.

Thus, regional cooperation within Tidewater Virginia is a viable, low cost and practical alternative to spending more than $176 million to construct and implement the Lake Gaston pipeline proposal. The Corps, consistent with its obligation to consider permit applications in the public interest, must analyze this regional alternative carefully before issuing a permit. See 33 C.F.R. §§ 320.4(a)(1) - (2). The best vehicle for such an analysis is an EIS. See 33 C.F.R. § 325.4(a)(3); 40 C.F.R. § 1502.14. On this additional ground, the State of North Carolina urges the Corps to prepare an EIS.

19/ Contrary to the implication of the draft EA, the Virginia Health Department has rejected recycling as an alternative for potable water uses, not non-potable water uses. See Letter from Virginia Department of Health to City of Virginia Beach, dated April 29, 1983.

CONCLUSION

For all the reasons mentioned in these comments, the State of North Carolina submits that the Corps must prepare an EIS to analyze the significant adverse effects which would result from implementation of the Lake Gaston project.

AMENDMENT IN THE NATURE OF A SUBSTITUTE TO H.R. 4317

OFFERED BY MR.

Strike out all after "A Bill" and insert in lieu thereof the following:

To prohibit the Secretary of the Army from permitting certain activities in connection with a proposed water pipeline project until an environmental impact statement for that project has been completed.

Sec. 1 Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, Notwithstanding any contract for water storage entered into before the date of enactment of this Act under the Water Supply Act of 1958 (43 U.S.C. 390b), the Secretary of the Army shall not permit the use of John H. Kerr Reservoir in North Carolina and Virginia for purposes of water storage in connection with any new project.

Sec. 2 Notwithstanding any permit which shall have been issued before the date of enactment of this Act under Section 10 of the Rivers and

Harbors Appropriation Act of 1899 (30 Stat. 1121; 33 U.S.C. 403) and under Section 404 of the Federal Water Pollution Control Act (33 U.S.C. 1344), the Secretary of the Army shall not permit any action to be taken by the personnel of the Army Corps of Engineers that would allow the grantee of such permit or any of its contractors to begin construction or to continue construction of any new project.

Sec. 3 The restrictions on Corps activity in this Act shall cease to be effective upon the completion of a detailed Statement of the environmental impact of such new project under Section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)(C)).

Sec. 4 For purposes of this Act, a "new project" is a water system, whether proposed or under construction, that was not operative on or before November 4, 1983 and which would transfer water outside the Roanoke River basin.

Mr. ROE. Please proceed.

TESTIMONY OF HON. JAMES B. HUNT, JR., GOVERNOR, STATE OF NORTH CAROLINA, ACCOMPANIED BY JOHN N. MORRIS, DIRECTOR, OFFICE OF WATER RESOURCES, NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

Governor HUNT. Thank you very much, Mr. Chairman. I appreciate very much the chance to be here today. I want to thank Congressman Neal for letting me go earlier, and the other distinguished Congressmen, and to say that I am very proud to be here with my Congressman, Congressman Valentine. I am one of his constituents, and we are very proud of him. And I was certainly proud of his questions earlier in this hearing today.

Mr. Chairman and members of the committee, I appreciate very much the chance to appear here today on behalf of the entire State of North Carolina, now the tenth largest State in this country, to support the bill introduced by Congressman Walter Jones and cosponsored by Congressmen Steve Neal, Tim Valentine, Jim Martin, and Dan Daniel, to require an environmental impact statement on the proposed diversion of water from Lake Gaston. Of course, you heard Congressman Jones suggest the change in language that he thinks would now be appropriate.

Mr. Chairman, let me briefly say a word about where this lake is. There have been questions about that today, and Congressman Daniel just fixed it from the west. It is in the rolling Piedmont part of our two States. The mountains are to the west and then, of course, you have Kerr Lake and Gaston Lake, and then flowing out of Gaston Lake you have got the Roanoke River which flows down into the Albemarle Sound. The Albemarle Sound lies behind the outer banks of North Carolina. Manteo one of our outer banks towns, is where we are going to celebrate the 400th anniversary of the first English settlement this summer.

Now the key thing here is that Roanoke River is a breeding ground for the striped bass, and that is dealt with in some of the testimony, and the Roanoke River provides the flushing force for the Albemarle Sound. That strong, vigorous flow of the water coming out of the Roanoke River going into the Albemarle Sound and flushing it out ultimately into the ocean keeps it from being polluted and filled up with algae and that sort of thing.

So I just wanted to help give a little information as to where it is located and how it relates to the whole ecological system.

Mr. Chairman, the citizens of North Carolina are tremendously concerned about this proposal to permanently divert 60 million gallons of water a day out of the Roanoke River Basin. Our State agencies have done much detailed research on this proposal. We have very carefully documented our concerns. I want to make it very clear that we are going to be a little hard on the Corps of Engineers here today, which is not to say that we do not appreciate much good work that they do, and the help they give our State, but they have made a terrible mistake in this matter.

We also, and our friends here from Virginia, we do not wish ill for Virginia Beach. That is a fine city and they need water. We just

think there are alternative ways for them to get it, and we think those should have been looked at very carefully. And, of course, this, as Congressman Jones says, is just about the perfect example of where an environmental impact statement ought to be done.

One, the matter is very controversial; second, there are unanswered environmental questions and, third, of course, you have got a matter that vitally affects two entire States. We have shown, Mr. Chairman, the diversion of this large amount of water for the Roanoke Basin will affect lake levels at Kerr Lake. We are particularly concerned about the reduced lake levels that could occur during dry periods and damage use of the lake for recreation. We already have problems with that. We already have boat ramps that are inoperable during certain periods of the year because of the low water level. We have already got stumps and other hazards out in the water that become a hazard at certain times.

We have documented the effect of this proposal in reducing flows downstream from Roanoke Rapids in the Roanoke River. The project will reduce the amount of water available, as I said, for striped bass spawning. The U. S. Fish and Wildlife Service has expressed their real concern about this aspect of the project. We have documented the effect of the project in reducing the flow of the Roanoke River during dry periods. Now, this raises, Mr. Chairman, serious concerns about the effects on water quality. That obviously is a function of the flow and the amount of water in that river. We find in the Chowan River, for example, that whether or not there is a strong flow affects how much algae buildup there is and the real quality of the water. We are concerned about that, as I said, both in the river and in the Albemarle Sound that it flows into and helps to flush out on a regular basis.

And when the Norfolk District of the Corps of Engineers held its first scoping meeting on the permit application by the city of Virginia Beach, North Carolina outlined the need for very careful environmental review of this project. We listed the items that should be studied before making a decision on the permit, and the Corps of Engineers turned a deaf ear to this request. The Norfolk District of the Corps of Engineers issued a very minimal environmental assessment on this major, major action. The Wilmington District of the Corps of Engineers concurred in this inadequate environmental review.

During the comment period, we carefully documented our concerns about the environmental impacts of this project. I am submitting copies of our comments to your subcommittee.

In evaluating a major water supply project, the first step is to evaluate alternative sources of water supply. The Corps of Engineers' environmental assessment is particularly weak in this area. We have repeatedly urged the corps to study the possibilities of regional water sharing and incremental additions to the existing regional supplies. The corps has continuously refused to give the alternative sources of water supply an objective review. Mr. Chairman, I hope this committee will look very, very carefully at those real alternatives that do exist.

North Carolina has documented some increased needs for water supply in the North Carolina portion of the Roanoke basin. We have documented future water supply needs for electric powerplant

cooling, municipal and industrial waste supply, and for agricultural irrigation.

Mr. Chairman, this area is just above the research triangle of North Carolina. We have many new plants coming into these counties that are related to the research triangle. Some of them have a research unit in the triangle, and their manufacturing facilities nearby, and it is in an area that is really taking off in terms of its economic growth. Of course, the amount of water they have will be critical to that.

The Corps of Engineers' environmental assessment has not even made a minimal attempt to study the long-range need for water within the Roanoke Basin, and to place the proposed diversion in this context of all needs in the Basin. They have looked at what is being used right now, Mr. Chairman. They have not looked at what we are going to be needing in 1990 or the year 2000 or the year 2030. That is the kind of overall look, at the total context and the total impact that ought to have been done.

We are particularly concerned that the Norfolk District of the corps was scheduled to complete a draft of a water supply study for the whole southside Hampton Roads area in the same month that it issued the permit for the Virginia Beach project. The Corps of Engineers' study has been underway for many years. If it is done correctly, it should answer many of our questions about the pros and cons of the alternative water sources, and about the amount of water really needed in Tidewater Virginia. We are distressed that the Corps of Engineers would issue a permit on a project of this size before releasing the results of this long-awaited study of that whole area to the public.

Now, Mr. Chairman, as Governor, like all public officials, I have found that a lot of times you have to make decisions that people do not agree with, tough decisions. What is really crucial is the process. Doing the thing in a way that reasonable people will find to be fair, that is what makes our whole democratic system work.

Throughout this process, both the Norfolk District and the Wilmington District of the Corps of Engineers have given every impression of partiality and haste in reaching this critical decision. We believe North Carolina's request for an environmental impact statement was ignored from the very beginning.

We filed substantial comments for consideration at every comment period. Yet the Norfolk District of the Corps of Engineers made its decision on granting the permit less than one working day after the close of the comment period. To us this shows their lack of willingness to seriously consider comments by the State of North Carolina and other interested parties.

In my experience as Governor of our State, I have had to face many difficult and controversial decisions. I have learned by experience that the best approach in these difficult matters is to bring all of the facts together for examination by the public.

I believe that the National Environmental Policy Act that this Congress passed created the environmental impact statement requirement just for this type of complex and controversial decision. After the facts are gathered, and the proposal has received open review and comments from people affected by the proposal, the decisionmaker can make these major decisions in a very careful

and considered way with due regard for the long-range interest of all parties concerned.

Mr. Chairman, in this case, adequate studies has not been given to the impacts of the project and to the alternative sources of water supply. The process that the corps followed in this case in effect tries to put the burden on us to come in to a couple of hearings and try to prove our case without the corps having to go out and really look into and study these matters. It is shifting the burden in a very unfair way. They should not make us come in to a hearing process, without their careful study of the project. That is not what I believe the people of this country expect us to do. There should not be that kind of shifting of the burden.

Instead of a careful decisionmaking process we faced a hasty and careless approach by the Corps of Engineers, with a total disregard for public concern. We are talking, Mr. Chairman, about the permanent commitment of enough water to serve a population of one-half million people. We are talking about the irreversible diversion of more water from the Roanoke Basin than is presently used by any municipal water system today in either North Carolina or the State of Virginia. That is the magnitude of this project, Mr. Chairman. To keep public confidence in government, decisions of this import, must be made with more fairness and more care, and I would just like to call your attention to this, Mr. Chairman and members of this committee. In the statement issuing the permit, Colonel Hudson, said this, and I find it hard to believe. When I saw it, I said surely he did not say this.

He says that a Department of the Army permit is not irreversible. It is capable of being modified, suspended, or revoked administratively, as the situation warrants. By modifying, suspending, or revoking the permit, the 60 million gallons per day commitment could be instantly retrieved. After spending $176 million? After putting all those people in Virginia Beach, in dependence on this as their supply of water, and having that city grow, and industries being built, and businesses established, depending on that water, it could be instantly retrieved?

I think that a decision was made, Mr. Chairman, to say that the permit could be instantly retrieved, but commonsense tells us that absolutely would not be the case.

Mr. Chairman, we are simply asking for something that I think is simple, and it is only just and fair. We are asking the support of this committee and of Congress in providing a fair and objective environmental impact statement on this major project.

We are forced to do environmental impact statements in North Carolina every time we turn around, Mr. Chairman. You know, for a long time I asked why should they force us to do that. Increasingly I have begun to understand the wisdom of getting people to understand all the facts and getting people to see that the process is fair.

Surely if there has ever been a case where an environmental impact statement ought to be done, it ought to be done here, and as Congressman Valentine pointed out, we are only talking about 6 to 18 months. Surely that could be done and ought to be done. We cannot condone the closed process that is taking place to date. Our request is that we examine the alternatives in the open process es-

tablished by Congress under the National Environmental Policy Act. This vitally affects the whole future of two States, Mr. Chairman. The least that could be done would be to do a full environmental impact statement.

I thank you very much for giving me this opportunity to speak for the State of North Carolina.

Mr. ROE. We want to thank you, Governor, for a very substantive presentation. I think you did fill in a number of the gaps that the committee was trying to search for at the beginning of this hearing.

I do not have a specific question.

The gentleman from Minnesota.

Mr. STANGELAND. I have no questions, Governor. I just concur with what you said. You fleshed out some of my questions.

Mr. ROE. The geftleean from California.

Mr. PACKARD. Thank you, Mr. Chairman.

I would like to pursue one question that I asked earlier.

Governor, the Roanoke River flows through both Virginia and North Carolina. You referred to the triangle area, and I am not familiar with the triangle area, but I have to assume that it is a rather progressive development area for industry.

Governor HUNT. Yes, sir, we consider it the rival of Silicon Valley, Congressman.

Mr. PACKARD. I can understand that clearly.

And you also referred to development in the Virginia Beach area as a result of their desire for additional water supplies there, and I have to continue to go back. Is there a defined distribution of water rights between the two States in terms of these pressures of development, from one State to another? Water rights, and water does induce, and does permit development of industry in your State, as well as in Virginia.

In your past experience, has that been well defined in terms of the distribution of the water rights?

Governor HUNT. Congressman, that has not been well defined, and we have had committees that have talked about these kinds of things, but I think that the fact that we do not have that in law, and I know that many Western States have dealt with these issues longer than we have, and in the East we are going to have to do more in this field, clearly, but in the absence of that, it seems to me that the environmental impact statement becomes that much more crucial, that at least in the absence of that, that we look at what the impacts are going to be, that we look at the fairness, that we look at whether or not there are alternatives available.

And so I would just say that because we do not have that in law, not having the tradition and the history and so forth that you have, that the environmental impact statement in this particular case becomes that much more crucial.

Mr. PACKARD. Thank you.

Mr. ROE. The gentleman from North Carolina.

Mr. VALENTINE. I do not have any questions. I just want to thank one of my more famous and eloquent constituents.

Thank you, Governor.

Mr. ROE. Governor, I am pleased that you took time to be with us today.

It seems to me that what you are pointing out, and so eloquently, was the vital impact of this decision upon the economic dynamics of both North Carolina and Virginia, and it centers on water supply, and I could not help but smile a bit when you were going through part of your testimony, because I thought to myself how hard we are fighting to develop a national water policy for this Nation.

We have not been able to get a bill passed now for 7 years. We are trying vigorously again, as you know, and we hope to be able to bring to this country the important point, and this is only one area. We did hear about North Carolina, by the way, a little bit yesterday, too, as I know you are aware, on the inlet project.

But you are bringing out clearly, and I am sure the other witnesses will, too, the vital import of the water supply system in our respective States, including mine, to the economic dynamics and the quality of life in those States.

I hope that at one time all of us can try to get across to perhaps the media, when we say to them that every water supply project, every flood control project, every hydro project is neither a boondoggle, now what is the other word used, pork barrel, that it is the very water supply and the health of the Nation that we are speaking to.

Govenor HUNT. That is right. And, Congressman, I would like to just add here, the Corps of Engineers does many things very, very well. They are crucial for this country, and we appreciate the good things they do.

I do not think it was ever anticipated by the Congress that they would make this kind of a decision, much less without an environmental impact statement. You think about the ramifications of this.

Suppose this was happening in your State of New Jersey, or maybe affecting two different States with this kind of magnitude, halfway across the State. Certainly the very least that ought to be done is an environmental impact statement.

Mr. Chairman, may I add one thing, and this is a little off the subject, but some of my fellow Governors have asked me to do this.

I know the committee of which you are a subcommittee, and I want to just take this chance on behalf of America's Governors, to urge the Congress to approve the interstate cost estimate, and the interstate substitution cost estimate, so that we can go forward with our highway program, and have the release of the $5½ billion of this year's highway funds authorized by the Surface Transportation Assistance Act of 1982.

Mr. Chairman, we are spending less money Federally than we were before the Act passed, even with the increase in the tax, and now we are having to stop projects, things are slowing down, we are going to have costs going up tremendously, we would urge that the full committee please move on this just as quickly as possible. We would hope it could be done right away, Mr. Chairman.

Mr. ROE. And if you would counterproprosal to me, and take back to the good citizens of North Carolina, and your distinguished representatives, that when this committee goes to the floor soon with the water resources development bill of this Nation, we would so like to have their understanding and support.

Governor HUNT. Thank you very much, Mr. Chairman.

Mr. DAUB. Mr. Chairman.

Mr. ROE. Just a moment.

Mr. Daub.

Mr. DAUB. Mr. Chairman, if I might indicate, I sit on the Surface Transportation Subcommittee. The House of Representatives, you may know, acted very promptly on the ICE, and we handled our work very well. We have just sat through 2 days of hearings on the matter, and let me assure you that we hear you loud and clear. This committee, we think, has had great leadership with our Chairman here and the chairman of the Surface Transportation Subcommittee, as well as the full committee.

Governor HUNT. We appreciate that.

Mr. ROE. Thank you very much, Governor.

Our next witness is our distinguished colleague the Honorable Stephen L. Neal from North Carolina. The Chair wants to welcome our distinguished colleague, and excellent Representative from that State.

The full text of your prepared statement will appear in the record at this point.

[Statement referred to follows:]

TESTIMONY PRESENTED BY CONGRESSMAN STEVE NEAL, ON THE PROPOSED INTERBASIN WATER TRANSFER BETWEEN LAKE GASTON AND VIRGINIA BEACH, FEBRUARY 8, 1984

I want to thank the Chairman and other members of the Subcommittee for providing me and other concerned citizens time to discuss the issue of transferring water from Lake Gaston to Virginia Beach.

Mr. Chairman, I have come before your Committee this morning to express the concerns of people of the 5th District of North Carolina, and in particular the residents of Rockingham County and others living along the Dan River.

The issue being considered here, Mr. Chairman, is whether the Corps of Engineers should allow the project to proceed without the benefit of an Environmental Impact Statement. As you know, the Corps has decided that it knows enough about the possible effects of the project and has given it the green light. There are others, however, who are convinced that the project will have a dramatic, negative effect on the townships and property owners in the Roanoke River basin. Moreover, it would set a regrettable precedent, making other areas targets for similarly easy solutions for the utilities of metropolitan areas many miles away.

I cannot say for certain that this project, if allowed to proceed, would cause significant environmental problems. But by the same token, Mr. Chairman, I do not believe anyone really knows the answer to that question. Therefore, I would urge the Committee to take favorable action on the pending bill and require the Corps of Engineers to conduct a full-scale environmental impact study to answer these thorny questions.

As the Committee is well aware, the availability of potable water is developing into a serious problem in many areas of the country. Therefore, we should be encouraging communities to more fully develop their indigenous water resources. Mr. Chairman, no one wants to deprive Virginia Beach of the water it legitimately needs, but it is not responsible policy to simply allow municipalities with water problems to run a pipeline far beyond its own jurisdiction until it hits good water, then turn on the pump.

Thank you again, Mr. Chairman, for considering my views.

I also want to commend to the Chairman and members of the Subcommittee a witness who will appear shortly. He is the Honorable James B. Hunt, the distinguished Governor of the State of North Carolina, who, I feel sure, will be coming to Washington in January as the new Senator from North Carolina. Governor Hunt is a great friend of the environment and a steward of our resources and I believe you will find his testimony compelling.

Mr. ROE. Please proceed.

TESTIMONY OF HON. STEPHEN L. NEAL, A MEMBER OF CONGRESS FROM THE STATE OF NORTH CAROLINA

Mr. NEAL. Thank you, Mr. Chairman.

I do want to thank you and other members of the subcommittee for providing me and other concerned citizens time to discuss the issue of transferring water from Lake Gaston to Virginia Beach.

Mr. Chairman, I come before your committee tnis morning to express the concerns of the people of the Fifth District of North Carolina, which is not near this lake, and in particular the residents of Rockingham County and others living along the Dan River. We are concerned about the precedent that this project could establish.

The issue being considered here, Mr. Chairman, is whether the Corps of Engineers should allow the project to proceed without the benefit of an environmental impact statement. As you know, the corps has decided that it knows enough about the possible effects of the project and has given it the green light.

There are others, however, who are convinced that the project will have a dramatic, negative effect on the townships and property owners and other people in the Roanoke River basin.

You have heard very eloquent testimony this morning to that effect. Moreover—and this is the point that I would like to stress in my brief testimony—it would set, I think, a very regretable precedent, making other areas targets for similarly easy solutions for the utilities of metropolitan areas, many miles away.

I cannot say for certain whether this project, if allowed to proceed, would cause significant environmental problems. But by the same token, Mr. Chairman, I do not believe anyone yet knows the answer to that question.

Therefore, I certainly urge the committee to take favorable action on the pending bill which, as you know, would require the corps to conduct a full-scale environmental impact study.

As the committee is well aware, the availability of potable water is developing into a serious problem in many areas of the country. Therefore, we should be encouraging communities to more fully develop and clean up if necessary their indigenous water resources.

Mr. Chairman, no one wants to deprive Virginia Beach of the water it legitimately needs, but it is not responsible policy to simply allow municipalities with water problems to run pipelines far beyond their own jurisdictions until they hit good water, then turn on the pump.

Mr. Chairman, to me, that is the issue and I want to thank you and other members of your subcommittee again for letting me appear here today.

Mr. ROE. Well, we want to thank our distinguished colleague for being with us.

I know you have been a real champion in the cause of clean water in our Nation and also water supply. So we appreciate your testimony a great deal.

Are there any questions of the gentleman?

Mr. STANGELAND. I have no questions, Mr. Chairman.

Mr. VALENTINE. I have none.

Mr. ROE. Thank you very much.

Our next witness is the Honorable James Martin from North Carolina.

Again, we want to welcome our distinguished Representative from North Carolina, and appreciate your being with us and we look forward to your testimony.

The full text of your prepared statement will appear in the record at this point.

[Statement referred to follows.]

STATEMENT OF HON. JAMES MARTIN

Mr. Chairman, thank you for the opportunity to appear before you today in support of my colleagues from North Carolina, Representatives Walter B. Jones, Tim Valentine, and Steve Neal.

The lakes on the North Carolina—Virginia border are at some distance from my District, which is south and west of the area of prime concern to you today. But, a significant number of constituents have interests in that area, either because their home towns are there or because they have vacation homes there.

We also have a long range problem implicit in the Lake Gaston controversy.

When I first came to this body in 1973, I served two years on the Committee on Interior and Insular Affairs. Coming from a water-rich area, I was stunned by the severity of the water resources problem in the West, and the passions it aroused. With this controversy, conflicts over water resources come East. I believe it is imperative that we avoid setting precedents for all-too-easy inter-basin transfers of water. We hope that in the Southeast we never develop the problems faced by the West, but we dare not ignore the potential for that happening.

It is my recommendation that permitting and work on this project be put off until an Environmental Impact Statement can be prepared.

There are alternatives to tapping Lake Gaston for the purpose of supplying water to Tidewater Virginia. Those alternatives have their costs, benefits, advantages and disadvantages, just like the Lake Gaston option. Examining those factors is at the core of an Environmental Impact Statement.

Among Virginia's options is cleaning up her local water supply. It is an option worth pursuing even without regard to any alternative.

The implications of the proposed pipeline project go far beyond the 60 million gallons a day draw on Lake Gaston. The most important implication is the precedent, the camel's nose of inter-basin transfers. Others will follow as we experience economic and demographic change. Some transfers in the future might advantage my District, or might disadvantage it. Future proposals might be utterly benign, or might have subtle, though serious impacts. We should, therefore, not begin down the path of short-cutting the route of the Environmental Impact Statement.

Mr. ROE. Please proceed.

TESTIMONY OF HON. JAMES MARTIN, A CONGRESSMAN FROM THE STATE OF NORTH CAROLINA

Mr. MARTIN. Mr. Chairman, members of the committee, I, too, want to thank you for the opportunity to be here.

You have my prepared statement for the record and I would like to make further comment.

I am here to join my colleague, Mr. Neal, in support of the legislation originally prepared by our colleagues: Walter Jones, Tim Valentine and Dan Daniel, to show that in our State there is statewide support and also that there is bipartisan support within our State.

The issue here is one of how easily and how blithely we are going to undertake interbasin transfers of water. The issue of interbasin transfers poses a much larger issue than even the initial 60 million gallon per day draw which is contemplated from Lake Gaston, and the Roanoke River basin. The precedents that are being set here could well haunt us as others rush to drain Lake Gaston, as well as

in other cases where another community prefers to tap an adjoining area's water to offer to attract new industries, rather than clean up its own water supply.

The question is, will we ignore environmental impact statements routinely or only in this case, and it seems to me that either answer is a serious answer. Environmental impact analysis is not just for the Corps of Engineers to require of others but should be required of the Corps of Engineers itself.

The water supply in northeast and North Carolina, and south central Virginia should be available for the needs of that area and not to be usurped or guzzled away, especially when alternatives are available as has been indicated here to date.

That leads to the further question of whether North Carolina in the future would be forced to contemplate going to clean up water in the Tidewater Virginia area, in order to provide for its future needs. So it is my hope that this Committee will move this legislation promptly to express the judgment of the Congress and of this committee that inter basin transfers must not be casually authorized until we are satisfied that the environmental impacts are known and that the residents of the covetous basin have first cleaned up their own supply.

And I thank you for the opportunity to present that statement, Mr. Chairman.

Mr. ROE. We want to thank you for a very clear and concise statement, and we appreciate it.

Is there any questions of the gentleman from North Carolina?

Mr. STANGELAND. I have no questions, just thank you for coming and giving us the benefit of his wisdom and feelings on that.

Mr. ROE. It is apparent that there is considerable interest in this project

Mr. MARTIN. It is certainly true, Mr. Chairman.

Mr. ROE. Thank you very much for being with us.

Our next witness is the distinguished gentleman from North Carolina, the Honorable Tim Valentine, who is also a very important member of this committee.

The Chair would recognize our colleague, Mr. Tim Valentine.

Mr. Valentine, the full text of your prepared statement will appear in the record at this point.

[Statement referred to follows:]

STATEMENT BY CONGRESSMAN TIM VALENTINE

Mr. Chairman: I am Tim Valentine representing the Second Congressional District of North Carolina. My constituents and I are very concerned about the proposal to divert a large quantity of water out of the Roanoke River Basin. We are particularly concerned that the U.S. Army Corps of Engineers has handled the permit for this massive project with haste, partiality, and completely inadequate documentation of its environmental and economic effects. This Committee should understand that this concern is felt not only in North Carolina but also by Southside Virginia.

The National Environmental Policy Act was enacted by Congress to make sure that major federal actions are carefully reviewed before final decisions are made. Because the Lake Gaston Pipeline Project will have widespread environmental impact, because it involves an irretrievable commitment of more water than is presently used by any city in either Virginia or North Carolina, because it could set a major water use precedent, and because it is the subject of great public concern and controversy, it seemed completely clear to me that an environmental impact statement should be required before a permit would be issued. The State of North Carolina requested an environmental impact statement on the project at the very begin-

ning of the permit process. For reasons that I cannot understand, the Norfolk District of the Corps of Engineers made a decision that an environmental impact statement would not be required even before the public was consulted about the project.

After making this initial decision, which I think was clearly faulty, the Corps of Engineers has stuck to this position despite the documentation provided by many interested parties and despite the calls for an environmental impact statement by dozens of elected officials and by hundreds of citizens.

The Corps of Engineers has compounded this appearance of impropriety by moving this project ahead in a hasty manner. The Norfolk District of the Corps of Engineers closed the public comment period on this project at the end of the business day on Friday, January 6. I know that a number of interested parties made substantial comments. A number of these comments were delivered to the Corps of Engineers on that last day of the comment period. The Norfolk District issued this permit less than one working day after the comment period closed, in spite of the fact that this legislation was pending, and that the Corps knew that a hearing had been scheduled for today.

All of this shows that the Corps had closed its mind to a consideration of the facts long before going through the public hearing and public comment procedure.

The Wilmington District of the Corps of Engineers had before it a request by the City of Virginia Beach for a reallocation of water storage in John H. Kerr Lake. This reallocation of storage is a required part of the Lake Gaston Pipeline Water Supply Project. The Wilmington District rushed ahead with a contract on this matter within about two weeks of the issuance of a permit by the Norfolk District. The contract was approved in Washington within about three weeks of the permit being issued. Despite the fact that this contract will have a profound long range effect on water management in Kerr Lake and in the Roanoke River Basin, I am not aware of any attempt to allow interested parties to review the terms of the proposed contract. The Wilmington District of the Corps of Engineers has rushed this matter ahead without the benefit of public scrutiny. I have asked the State of North Carolina for information about the normal process for entering into these agreements. I have learned that North Carolina has been working toward a contractual agreement with the Corps of Engineers to lease public lands at the Falls Lake Project for recreation management. This arrangement has been under discussion for a long period of time and is completely non-controversial. Despite this, the contract signed by the State of North Carolina in September, 1983 has yet to be approved by the Federal Government. I do not understand why the Corps believes that the contract about storage of water in Kerr Lake should be rushed through in this way while other matters sit waiting for action.

One of our major concerns about this whole business is that the public is not being given complete and objective information that would allow it to judge the effects of the Lake Gaston pipeline and evaluate the alternative sources of water supply that are available to Virginia Beach. It is very frustrating to us that there is much existing information which is in effect being withheld from the public. The Norfolk District of the Corps of Engineers has been studying water supply alternatives for the Southside Hampton Roads region for many years. This region includes the City of Virginia Beach, Norfolk, Portsmouth, Chesapeake, and other neighboring communities. In 1978, the Norfolk District released a tentative recommendation that Lake Gaston would be the best long range water source for the Southside Hampton Roads area. At that time, the higher levels of the Corps of Engineers determined that this study had not included adequate consideration of water conservation possibilities. The Norfolk District was asked to go back and re-evaluate the future demand for water in Tidewater Virginia according to new planning standards.

The Norfolk District of the Corps of Engineers has done a great amount of work on this water supply plan since 1978. The Corps has gathered data on the yield of all existing water supply sources, the projected future requirements for water, and the projected deficit that must be met over a 50 year planning period. In fact, the draft of this study was scheduled to be completed by the Norfolk District in January 1984. Instead of releasing this study to the public to provide some insight on the Lake Gaston Permit application, the Corps of Engineers rushed ahead to issue the Lake Gaston permit, effectively denying the public the benefit of its years of work and expenditure of public funds for the study.

The Norfolk District and the Wilmington District of the Corps of Engineers have systematically worked to rush the permit for this project through, to deny legitimate requests for an environmental impact statement, and to deny the public the opportunity to evaluate this permit in the light of their regional study of Tidewater

Virginia's water supply needs. This is not the way major public decisions should be made.

I want to tell the Committee very briefly why we are so concerned about this matter. We know that using Kerr Lake water supply storage for the Lake Gaston Pipeline will cause additional fluctuations in the level of Kerr Lake. We are already having some severe problems during dry periods with low water levels which cause boat ramps to be unusable and create navigation hazards. There have been several different studies of the effect of the pipeline. The estimates of the additional drawdown in Kerr Lake differ widely. Who are we to believe on this? We badly need an environmental impact statement to determine what the effects of this project on Kerr Lake will be.

We are also greatly concerned about the effect of the project in reducing flows in the Roanoke River downstream from Roanoke Rapids Lake. We have some rapidly growing needs for water in this area for industry, municipal use, and for agriculture irrigation. We are frustrated that the Corps of Engineers has not even attempted to make a basin-wide projection of water use over the 50 year planning period. The Corps of Engineers has granted a permit that will permanently commit a large amount of water to a user over 100 miles away without really determining how much water is needed in the basin. We are also concerned that the reduction in flows during dry periods will aggravate some water quality problems that we are already experiencing.

Mr. Chairman, Members of the Committee, we are very concerned here about the real economic and environmental impact that the Lake Gaston Pipeline will have on the Roanoke Basin. We are also upset about the way in which this fundamental decision is being made. I think that we have shown that the Corps of Engineers has attempted to rush this through rather than giving the public the materials that it needs to really understand what is being done. We are asking support for this bill today which will just do one thing. It will give interested citizens in both Virginia and North Carolina a fair and objective assessment of this project. The imprudent action by the Corps of Engineers forces us to come to the Congress for a remedy that should have been granted by administrative decision.

Thank you very much for your time and for the opportunity to present our concerns about the Roanoke Basin.

Mr. ROE. Please proceed.

TESTIMONY OF HON. TIM VALENTINE, A MEMBER OF CONGRESS FROM THE STATE OF NORTH CAROLINA

Mr. VALENTINE. Thank you, Mr. Chairman.

I have glanced at the statements by my colleagues and I guess with seniority comes brevity you have my written statement, and also, Mr. Chairman, and members of the committee, a lot of what I have to say here would be merely, at this point, repetitious.

I want to simply stress the fact that what our good Governor had to say, that we are not here to fight or scrap unnecessarily with the Corps of Engineers. One wonders sometimes. I must say, was it that Shakespeare said, "What meat doth this, our Caesar feed, that he hath grown so great."

I wonder sometimes where all the power that the corps seems to wield comes from, but most of the time they handle it quite well, but I suggest to you that in this case unless they change their attitude or unless they are forced to do it by Congress, serious and irreparable damage will be done to the largest segment of American citizens.

This is, I think, quite clearly an effort to reach for the expedience of running a pipe over about 100 miles into a pristine water supply and solving the problems of a growing metropolitan area where they have—they should be required to look in their own backyard and to clean up their own sources of water, or at least explain to us who are affected by this escapade, how or why they should not do that.

I suggest to you that the Corps of Engineers is rushing to judgment and I do not know what the reason for it is, I do not know if I was advising them, I would say they are talking environmental impact study, give it to them. We are asking them to do it. We are not, and I think that may be—is somewhat ironic, we are not asking a different agency. Maybe we should be asking them. We are not asking some other branch of government. We are asking the Corps of Engineers just to take the time to make a full environmental impact statement so that we could have these questions answered.

Now, Mr. Chairman, I think it is important to realize that the Wilmington District of the corps had before it a request from the city of Virginia Beach for a reallocation of water storage in the John H. Kerr Lake. This reallocation of storage is a required part of the Lake Gaston pipeline water supply project. The Wilmington District rushed ahead with a contract on this matter within about 2 weeks of the issuance of a permit by the Norfolk District.

The contract was approved in Washington within about 3 weeks of the permit being issued—amazing. Despite the fact that this contract will have a profound long-range effect on water management in Kerr Lake, and in the Roanoke River Basin, I am not aware of any attempt to allow interested parties to review the terms of the proposed contract.

The Wilmington District of the Corps of Engineers has rushed this matter ahead without the benefit of public scrutiny and that is wrong. I have asked the State of North Carolina for information about the normal process for entering into these agreements, and I have learned that North Carolina has been working toward a contractual agreement with the Corps of Engineers, to lease public lands at the Falls Lake project for recreational management. This arrangement has been under discussion for a long period of time, and is completely noncontroversial, despite this, the contract signed by the State of North Carolina in September of 1983 has yet to be approved by the Federal Government.

I do not understand why the corps believes that the contract about storage of water in Kerr Lake should be rushed through in this way while other matters sit waiting for action and especially when the legislation that we are here talking about is before the U.S. Congress. One of the major concerns of this whole business is that the public is not being given complete and objective information that would allow it to judge the effects of Lake Gaston pipeline and evaluate the alternatives versus the water supplies that are available to Virginia Beach.

Now, I want to repeat what our good Governor and others have said. I do not want to be—anybody to think that as a Congressman or as a North Carolinian, or as a fellow human being, that we are here to say to any other group of God's children that you shan't have the water that gives life. If you have a problem, we are not acting that way.

All we want them to do is to show us, to demonstrate to us why it is necessary to move 100 miles from that area in Virginia, and use this water without giving one tinker's darn about the future development of the area around this section of Virginia and North Carolina. All we want really is for them, if it is good as they say it

is, if there is no problem, then let them demonstrate that to us. It is very frustrating to us that there is much existing information which in effect has been withheld and is withheld to this good day.

They will tell you to go on down, to come on up to Norfolk and look at it. That is like looking for a needle in a haystack, and we say, as our Governor said, they have some obligation to get it altogether and show it to us. This region represents, as you know—I do not need to go through all that, Virginia Beach, Norfolk, and Portsmouth and Chesapeake and other areas are neighboring communities. The Norfolk District Corps of Engineers has done a great amount of work on this water supply problem since 1978, as they gathered the data that's been talked about by the Governor, yet they have a report on that, was due in July—I mean in January, and they have not waited even to file their own report before they issued this permit.

We know that using Kerr Lake water supply storage for the Lake Gaston pipeline will cause additional fluctuations in the level of Kerr Lake and this is a concern which they have not addressed. We are also very much concerned about the effect of the project in reducing the flows of Roanoke River downstream and we suggest to you that this is a matter which the Corps of Engineers, which have the responsibility and should have some feeling not only about Norfolk where the district office is located, but a concern about the people in North Carolina and in Virginia that are affected by this transfer.

Mr. Chairman, finally, and members of the committee, I want to say to you that we are, and maybe it is obvious to you, I hope it is, that we are deeply concerned about the real economic and environmental impact that the Lake Gaston pipeline will have on the Roanoke basin.

Sometimes I feel that we are like a voice crying in the wilderness. We are also upset about the way in which this fundamental decision is being made and I think that we have shown that the Corps of Engineers has attempted to rush this through rather than giving the public the materials that it needs to really understand what is being done.

We are asking support for this bill today which will do just one thing, and that is the only way we got to get it done. It will just do one thing, and it will give interested citizens in North Carolina and Virginia a fair and a just assessment of this project, we think that it will also restore some faith in the Corps of Engineers.

I want to thank you very much for your time and for the opportunity which you have given me and others to express ourselves.

Thank you, Mr. Chairman.

Mr. ROE. The Chair wants to thank the gentleman very much for his very adroit and concise testimony and I appreciate his taking the time to be with us this morning.

Are there any specific questions for the gentleman from North Carolina?

Mr. STANGELAND. I have no questions.

Thank you, Mr. Chairman.

Mr. ROE. We want to thank you very much.

Our next witness is Attorney General Rufus L. Edmisten from the State of North Carolina. We want to welcome you to our committee.

The full text of your prepared statement will appear in the record at this point.

[Statement referred to follows:]

STATEMENT BY HON. RUFUS L. EDMISTEN, ATTORNEY GENERAL OF THE STATE OF NORTH CAROLINA

Mr. Chairman and members of the committee: I wish to thank you for the opportunity of appearing before you this morning, to speak to an issue of grave concern to the citizens of North Carolina and Virginia. I will direct my remarks to the legal issues raised by the Corps of Engineers' hasty and ill-conceived action in granting a permit for the Lake Gaston to Virginia Beach pipeline, and I will explain why its actions are repugnant to both Federal law and the Corps own regulations.[1]

As you all are no doubt aware, the National Environmental Policy Act requires that, for every major Federal action which significantly affects the quality of the human environment, a detailed statement which assesses the environmental consequences of the project must be prepared. The purpose of this requirement, as explained by the Council on Environmental Quality Regulations, is to insure that environmental information is made available to public officials and citizens before decisions are made and actions are taken. The regulations require that this information be of high quality, containing accurate scientific analysis of the project as well as available alternatives, so that the final action will be one that protects and enhances the environment to the fullest extent possible. In their regulations, the Corps of Engineers promises to implement these policies "vigorously".

Instead of fulfilling this promise here, the Corps determined that the Lake Gaston project would not significantly affect the human environment. It based its finding on an environmental assessment which not only stretches logic beyond its bounds, but evidences a capitulation of legal duty. In fact, there environmental assessment is significant not for what it contains, but for what it does not contain.

Initially, it is noted that the assessment fails to evaluate the project in light of the long-term needs and uses within the affected region. The Corps has refused to analyze the effect this project will have on the Roanoke River basin as it will exist when the withdrawals actually take place. As this committee is aware, it is only in such a realistic setting that a rational and scientific determination of the pipeline's impacts on the human environment can occur. Such a non-biased approach is mandated by the National Environmental Policy Act.

Because of this fundamental deficiency, the Corps' environmental assessment fails to appraise the project's probable impacts on the Albemarle Sound, an area of vital importance to the North Carolina coastal fishing industry. The assessment further fails to appraise properly the project's probable impact on the water levels at Kerr Lake. It fails to assess realistically and scientifically the project's probable impact on striped bass spawning and migration. It fails to predict accurately the project's probable impact on the reduction in hydroelectric power production. It also fails to assess appropriately the project's probable impact on low flow augmentation and effluent assimilation in the Roanoke River. The impact of the project on these areas must be fully examined before a reasoned and informed decision on this project can be made.

Aside from this fundamental illegality, the Corps' assessment is fraught with additional deficiencies. They have failed even to attempt an analysis of the project's cumulative impacts on the Roanoke River basin. In the lower basin, particularly, there exists a complex interrelationship between lake levels, flow patterns, and water quality. An impact on any one of these will necessarily affect the rest. Further, the Corps has refused to concede the "irreversible and irretrievable" nature of this commitment of resources. This criteria, contained in NEPA regulations, provides a threshold determination of the significance of a project's effect. The Corps denies, however, the existence of such a commitment, based on the preposterous assertion that, because it will continue to rain in the basin, no water is actually lost. It compounds this ridiculous denial with the equally illogical theory that, since it is

[1] On January 12, 1984, the State of North Carolina filed suit against the Corps of Engineers in Federal district court seeking to have the permit issued for the Lake Gaston pipeline invalidated. A copy of the complaint, which sets forth the legal issues surrounding this controversy in greater detail, is attached to this statement as Exhibit I.

within the realm of possibility that the permit could be revoked in the future, the commitment could be reversed.

It is important to remember that we're talking about enough water to supply a city of 500,000 people. Clearly, each and every day that Virginia Beach is allowed to pump this vast quantity of water to feed its development addiction, that amount will be lost to our region forever. Make no mistake, once this $200 million dollar project is completed, there will be no turning back. The Corps' attempt at justification is absurd. Additionally, the assessment ignores the fact that their action, which allows a massive interbasin diversion without any realistic environmental analysis, will act as a precedent for future withdrawals. The document fails to consider, as required by law, the growth-inducing effects and the ecological degradation that the pipeline will have on Virginia Beach itself. Its' action also violates the Corps' regulations which require an environmental impact statement for proposals, such as this, which result in significant changes in the operation of a dam or lake project.

Perhaps the most glaring deficiency is provided by the corp's biased exploration of the possible alternatives to this project. Thorough and reasoned analysis of possible alternatives entailing less environmental damage, is the very heart of NEPA decision making. The Corps has chosen to ignore this basic requirement. As an example, they have refused to consider rationally the alternative of regional cooperation and sharing, which, with minor augmentation, could meet the tidewater area's needs for water well into the future. This alternative not only would cost substantially less, but would protect, enhance and restore the environment to a much greater degree. The Corps has written off this option on the illogical theory that having an autonomous source of water is justification in and of itself for the project, regardless of the consequences.

Based on the foregoing, it is manifest that the Corps has not lived up to the mandate of the law. As explained by Governor Hunt, the State of North Carolina has provided the Corps with documentation of the significant impacts which the pipeline will cause. It must be remembered, however, that the Roanoke River basin is an extremely complex ecosystem, and even our studies have only reached preliminary conclusions. The potential for harm is too great to allow this project to go forward without the full, fair, and complete scientific analysis entailed in the EIS process.

This brings us to the second Federal statute which has been violated by the Corps action, one which requires this Congress' approval before the pipeline can be built, i.e. the Water Supply Act of 1958. Section 301(d) of that act specifically prohibits any modifications of a reservoir project, such as we have here, without prior approval of Congress, where the modifications would seriously affect the purposes for which the project was planned, authorized or constructed. The Kerr Lake Reservoir was a Federal project proposed by the Corps to Congress pursuant to the Flood Control Act of 1944 to satisfy a documented need in the Roanoke River basin for flood control, hydroelectric power generation and low flow augmentation. The project was built specifically and strictly for these three purposes. Further, while the Gaston and Roanoke Rapids Dam facilities themselves are not federally constructed or operated, this fact does not exempt the proposed withdrawal at Lake Gaston from prior congressional approval.

The Gaston and Roanoke Rapids facilities were proposed as two of the eleven projects enumerated by the Corps in its 1944 report to Congress. These projects in the Roanoke River basin were recommended as a singular response to serious environmental problems in that basin. Thus, when Congress approved and authorized development of these projects and when VEPCO obtained permits from the Federal Power Commission to operate the Gaston and Roanoke Rapids facilities, the three fundamental purposes of the river basin projects remained paramount. If the pipeline project requires modifications which seriously affect the paramount purposes for these three projects, congressional approval must be given prior to the inception.

Interestingly, even under its biased and one-sided analysis, the Corps has estimated that Virginia Beach would have to repay it as well as VEPCO in the neighborhood of 1.5 million dollars per year for loss of storage capacity and of hydoelectric generation caused by the project. Without question, such a large repayment is evidence of a serious effect. More importantly, as stated above, the Corps' woefully inadequate environmental assessment fails to provide a basis upon which a decision as to the project's effect on this lake system can be made. From it, one just cannot determine what actual effects the withdrawal will have upon the authorized uses. A full environmental impact statement is necessary in order for that determination to be made. It is only then that Congress' role in approving this project can be decided and the clear requirement of law effectuated. We are convinced that a nonbiased,

realistic and scientific appraisal will reveal that your approval is a necessary prerequisite to the allowance of this massive diversion.

Although not directly related to the environmental impact statement issue, I would like to note that the Corps action on this permit also violated two additional Federal Statutes. The Corps, by issuing the permit on the same day as final Virginia water quality certification for the project was issued, has refused to provide sufficient time for an EPA Determination of the project's impact on North Carolina water quality, as required by section 401(a) of the Clean Water Act. In addition, it has ignored the clear requirement of section 307 of the Federal Coastal Zone Management Act by refusing to follow the consistency determination requirements set out in the Act.

In conclusion, it is absolutely crystal clear that the Corps has ignored the mandate of several laws applicable to the project. This controversy comes down to a question of basic legality and fairness. It is both illegal and unfair to allow the pipeline to be built without proper assurances that it will not seriously harm the environment of a vital region, it is equally unfair to allow Virginia Beach to refuse to properly utilize its own water sources and then rob from those who have protected their resources through proper stewardship when such action would cause environmental harm. The answers to our concerns have not been provided. They can only be provided by an environmental impact statement. The Corps has callously turned a deaf ear to both the law and the legitimate needs of the people of North Carolina. Our citizens deserve better.

EXHIBIT 1

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA
Raleigh Division

STATE OF NORTH CAROLINA, Plaintiff, v. COLONEL RONALD E. HUDSON, in his official capacity as Norfolk District Engineer; COLONEL WAYNE A. HANSON, in his official capacity as Wilmington District Engineer; LIEUTENANT GENERAL JOSEPH K. BRATTON, in his official capacity as the Chief of Engineers of the United States Army Corps of Engineers; WILLIAM R. GIANELLI, in his official capacity as Assistant Secretary of the United States Department of the Army; and JOHN O. MARSH, in his official capacity as Secretary of the United States Department of the Army, Defendants.	COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF Civil Action No.____

Plaintiff, by counsel, alleges for its complaint as follows:

INTRODUCTION

1. This action challenges the issuance of a permit by the United States Army Corps of Engineers ("Corps"), pursuant to 33 U.S.C. §§ 403 and 1344, authorizing construction in and affecting navigable waters of the United States and the discharge of dredged or fill materials into waters of the United States. The permit, which was issued on January 9, 1984 to the City of Virginia Beach, Virginia, authorizes installation of a sixty-inch inside diameter pipeline at the Pea Hill Creek tributary of Lake

Gaston for the stated purpose of ultimately diverting at least sixty million gallons per day ("mgd") of water from the Roanoke River Basin to the raw water facilities of the City of Norfolk, Virginia, located approximately 84.5 miles away (hereinafter the "Project").

In separate counts, this Complaint sets forth seven basic ways in which the Corps' action in issuing the permit was unreasonable, arbitrary and capricious, an abuse of discretion and contrary to the laws of the United States and the Corps' own regulations:

> Count I -- The Corps unreasonably determined that the Project would have no significant impact on the human environment and failed to prepare an Environmental Impact Statement in violation of the National Environmental Policy Act;
>
> Count II -- The Corps unlawfully failed to give reasonable consideration to alternatives to the Project which would have a less severe environmental impact, as required by the Clean Water Act and the National Environmental Policy Act;
>
> Count III -- The Corps unlawfully failed to consider the cumulative environmental impacts of the Project as required by the River and Harbor Act, the Clean Water Act and the Corps' own regulations;

Count IV -- The Corps violated the Federal Coastal Zone Management Act of 1972, as amended, and its implementing regulations by failing to determine the consistency of the Project with the North Carolina Coastal Zone Management Program and by failing to require Virginia Beach to certify the consistency of the Project with the North Carolina Coastal Zone Management Program;

Count V -- The Corps' issuance of a permit violates the Water Supply Act because it is improperly predicated upon a reallocation of storage facilities at a federal reservoir when such a reallocation must be authorized expressly by the United States Congress;

Count VI -- The Corps' issuance of a permit prior to a determination by the Environmental Protection Agency of the Project's effect on water quality in North Carolina unlawfully deprives North Carolina of an opportunity for a hearing on the water quality issue; and

Count VII -- The Corps violated its own regulations governing review of permit applications because, without the review of the division engineer, it issued a permit for the Project which is contrary to the written position of the Governor of North Carolina and which is of questionable legality under applicable Federal and State law.

JURISDICTION AND VENUE

2. This Court has jurisdiction over this action pursuant to 28 U.S.C. § 1331 (federal question); 5 U.S.C. §§ 701-706 and 28 U.S.C. § 1361 (action in the nature of mandamus); and 28 U.S.C. §§ 2201-2202 (action for declaratory judgment).

3. This action arises under and is brought to enforce Section 10 of the Rivers and Harbors Appropriation Act of 1899, 33 U.S.C. § 403 ("River and Harbor Act"); Sections 401 and 404 of the Federal Water Pollution Control Act, 33 U.S.C. §§ 1341 and 1344 ("Clean Water Act"); Section 102 of the National Environmental Policy Act of 1969, 42 U.S.C. § 4332 ("NEPA"); Section 307 of the Federal Coastal Zone Management Act of 1972, as amended, 16 U.S.C. § 1456 ("Coastal Zone Management Act"); and Section 10(b) of the Administrative Procedure Act, 5 U.S.C. § 703, and their respective implementing regulations.

4. Venue is proper in this district pursuant to 28 U.S.C. § 1391(e)(4). Plaintiff State of North Carolina has its official residence in Raleigh, North Carolina, which is within the Eastern District of North Carolina.

PARTIES

5. Plaintiff State of North Carolina is a State of the United States of America and brings this action on its own behalf as proprietor of riparian and littoral property which will be adversely affected by the Project as authorized by the Corps'

permit. The State of North Carolina also brings this action as parens patriae for all its citizens who will be adversely affected by the Project.

6. Defendant Colonel Ronald E. Hudson is sued in his official capacity as District Engineer for the Norfolk District of the United States Army Corps of Engineers. Defendant Hudson is responsible on a daily basis for the operation of the Norfolk District office of the Army Corps of Engineers, including the activity of the Corps' personnel under his supervision. The Norfolk District office, located at Fort Norfolk, 803 Front Street, Norfolk, Virginia 23510, has within its jurisdiction the Commonwealth of Virginia. Defendant Hudson is responsible in the first instance for the lawful implementation of the River and Harbor Act, the Clean Water Act and NEPA as they relate to projects affecting navigable waters within his jurisdiction.

7. Defendant Colonel Wayne A. Hanson is sued in his official capacity as District Engineer of the Wilmington District of the United States Army Corps of Engineers. Defendant Hanson is responsible on a daily basis for the operation of the Wilmington District office of the Army Corps of Engineers, including the activity of the Corps' personnel under his supervision. The Wilmington District office, located at The Federal Building, Water and Princess Streets, Wilmington, North Carolina 28402, has within its jurisdiction the State of North Carolina. Defendant Hanson is responsible in the first instance for the lawful implementation of the River and Harbor Act, the

Clean Water Act and NEPA as they relate to projects affecting navigable waters within his jurisdiction.

8. Defendant Lieutenant General Joseph K. Bratton is sued in his official capacity as the Chief of Engineers of the United States Army Corps of Engineers. His office is located at The Pulaski Building, 20th and Massachusetts Avenue, N.W., Washington, D.C. 20314. Defendant Bratton is responsible for the nationwide lawful implementation of the Corps permit programs under the River and Harbor Act, the Clean Water Act, and NEPA on a daily basis. Defendant Bratton's duties include responsibility for the actions of Corps officials under his supervision.

9. Defendant William R. Gianelli is sued in his official capacity as Assistant Secretary (Civil Works) of the United States Department of the Army, the principal office of which is located at The Pentagon, Washington, D.C. 20310. In that capacity he has immediate responsibility for supervision of the Corps of Engineers and is responsible for insuring lawful implementation of the Corps permit programs under the River and Harbor Act, the Clean Water Act, and NEPA.

10. Defendant John O. Marsh, Jr., is sued in his official capacity as Secretary of the United States Department of the Army, the principal office of which is located at The Pentagon, Washington, D.C. 20310. Defendant Marsh is charged with ultimate responsibility for insuring that the actions of the Department of the Army and the Corps of Engineers under the River

and Harbor Act, the Clean Water Act and NEPA, including the issuance of regulations and permits, are conducted in accord with applicable laws and regulations.

GENERAL ALLEGATIONS

11. On or about July 15, 1983, the City of Virginia Beach, Virginia submitted a permit application, No. 83-0747-06, to the Norfolk District Office of the United States Army Corps of Engineers for construction of a pipeline which would ultimately divert at least sixty million gallons of water per day ("mgd") from the Roanoke River Basin to the City of Norfolk's raw water facilities in Tidewater, Virginia. The Project is intended to satisfy potential demands for municipal water supplies in Virginia Beach and other Virginia communities over at least the next fifty years.

12. The application for the Project contemplates construction of a water intake structure, pier and boathouse, in the Pea Hill Creek tributary to Lake Gaston, and a sixty-inch inside diameter concrete pipeline approximately 84.5 miles long to extend from Pea Hill Creek to a connection with a City of Norfolk water pipeline located in the Red Top area of Suffolk, Virginia.

13. The Project's construction is estimated to cost at least $176 million. In addition, Virginia Beach would be required to pay the Corps $773,800 annually for storage space at the John H. Kerr Reservoir ("Kerr Reservoir") and to pay the

Virginia Electric and Power Company $876,960 annually for a loss of hydroelectric power generation at its Gaston and Roanoke Rapids dams as a result of the Project. The Corps' issuance of a permit for a Project of this magnitude and environmental significance constitutes a major federal action significantly affecting the quality of the human environment.

14. Nonetheless, on December 7, 1983, the Corps issued a final Environmental Assessment ("EA") and Finding Of No Significant Impact ("FONSI"). The Corps requested comments on the EA and FONSI to be filed on or before Friday, January 6, 1984. The State of North Carolina and others filed extensive comments on January 6, 1984. The Corps, without fully and fairly reviewing these comments, issued a permit to Virginia Beach for the Project on Monday, January 9, 1984.

COUNT I

15. Plaintiff realleges paragraphs 1 through 14 as if fully set forth herein.

16. Section 102(2)(C) of NEPA and Appendix B, paragraph 10, of the Corps' policy and procedures implementing NEPA, 33 C.F.R. Part 230, require the district engineer to prepare an Environmental Impact Statement ("EIS") prior to the issuance of a Corps permit for an activity, such as the Project, which significantly affects the quality of the human environment.

17. The Corps' determination that the Project would have no significant impact on the environment was unreasonable, arbitrary and capricious, an abuse of discretion and contrary to law because the Corps ignored or failed to give reasonable consideration to:

(a) the long-term needs of existing and potential local users of the waters in the Roanoke River Basin;

(b) the irretrievable and irreversible commitment of resources resulting from the Project, including the ultimate diversion of at least 60 million gallons of water from the Roanoke River Basin every day it is in operation;

(c) the fact that the contemplated withdrawal, which is at least 60 times as large as any present municipal water withdrawal from the Roanoke River Basin, would establish a precedent for future major water diversions from the Basin both by Virginia Beach and other municipalities outside the Basin;

(d) the cumulative environmental effects of all existing and reasonably anticipated withdrawals from the Roanoke River Basin;

(e) the bona fide controversies regarding the effects of the Project on the quality of the human environment;

(f) the Project's significant adverse impacts upon the use of existing recreational facilities operated by the State of North Carolina and other interests at Kerr Reservoir;

(g) the expected damage to aquatic resources of the Roanoke River Basin downstream from the Roanoke Rapids dam due to reduction in current releases of water from the Roanoke Rapids dam necessary to aid spawning and migration of anadromous fish including striped bass;

(h) the Project's impact upon current and anticipated industrial activity in the Roanoke River Basin insofar as such activity must comply with established water quality standards for the River;

(i) the Project's impact on current and anticipated municipal water demands in the Roanoke River Basin;

(j) the Project's adverse effects on the development of irrigation for agricultural purposes in the Roanoke River Basin;

(k) the Project's adverse effects on the lower Roanoke River and Albemarle Sound due to changes in, inter alia:

(i) the frequency, quantity and duration of low flows in the Roanoke River and thereby in the water quality of the River and in the Sound;

(ii) the retention times in Kerr, Gaston and Roanoke Rapids Reservoirs and thereby in the settling of suspended solids and sediments in the water and in the water quality of the River and the Sound;

(iii) the frequency and duration of minimum flow releases from Roanoke Rapids Reservoir and thereby on the water quality and marine life in the River and in the Sound;

(iv) the allowable assimilative capacity for existing and proposed discharges in North Carolina;

(v) the salinity in the River and in the Sound on a long-term basis due to net reduction in total flow of fresh water into the Sound; and

(vi) the concentration of Chowan River pollutants due to diminution of Roanoke River water and associated effects of such reduction on water quality in the Sound;

(l) the violation of Virginia and North Carolina environmental laws regarding the protection of riparian rights resulting from the Project;

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(m) the water and air quality impacts of the Project's residential and industrial growth inducing effects in and around Virginia Beach; and

(n) the concerns of property owners in areas surrounding the Kerr and Gaston Reservoirs that the value of their real estate has declined and would continue to do so as a result of the Project;

(o) the Project's potential harm to future development of the Pea Hill Creek area due to resulting restrictions imposed upon the location of businesses in the watershed area, the total amount and density of development in the area, the use of septic tanks, agricultural pesticides and herbicides, and the installation of package sewage treatment plants; and

(p) the cumulative impact of the above-stated factors and other factors which were separately considered by the Corps.

18. Additional Corps regulations require the Corps to prepare an EIS whenever a proposal involves the operation of a dam and lake project or when the proposal would result in significant changes in the management of project resources. 33 C.F.R. § 230.6(d).

19. The Project involves the operation of three dam and lake facilities in Virginia and North Carolina, one of which is

managed by the Corps itself and two of which are controlled by Corps policy, pursuant to the Roanoke River Basin development plan and the terms of the Federal Energy Regulatory Commission's licenses for those facilities. The Project will significantly affect the management of water resources in Kerr, Gaston and Roanoke Rapids Reservoirs for flood control, hydroelectric power generation and low-flow augmentation functions.

20. Despite the Project's significant impacts on the human environment and significant changes in the resource management of dam and lake projects, defendants failed to prepare an EIS prior to the Corps' issuance of the permit in violation of section 102(2)(C) of NEPA and 33 C.F.R. Part 230.

COUNT II

21. Plaintiff hereby realleges paragraphs 1 through 20 as if fully set forth herein.

22. The Corps is required under section 102(2)(E) of NEPA to develop all appropriate alternatives to a recommended course of action for any proposal that involves unresolved conflicts concerning alternative uses of available resources.

23. In addition, the Corps' own regulations, 40 C.F.R. § 230.10(a), issued pursuant to the Clean Water Act, prohibit the Corps from issuing a permit for the discharge of dredged or fill material if there is a practicable alternative to the proposed

discharge which would have a less adverse impact on the aquatic ecosystem.

24. Plaintiff and others repeatedly submitted oral and written comments to the Corps identifying adverse environmental impacts of the proposed Project and recommending alternative water supply plans for Virginia Beach including (a) a plan based on a combination of regional cooperation among the cities in Tidewater, Virginia and utilization of the area's ground water resources and (b) a plan for the indirect reuse of municipal water supplies.

25. The Corps arbitrarily, capriciously and unreasonably failed to consider or rejected these and other reasonable proposed alternatives due to:

(a) its adoption of an unreasonable precondition that a source of water be "autonomous" for it to be acceptable as an alternative;

(b) its unreasonable and unfounded assumption that any plan which did not increase the amount of water in the Tidewater area cannot satisfy Virginia Beach's stated need for an additional 60 mgd; and

(c) its arbitrary, capricious and unreasonable application of inconsistent policies with respect to the impacts of applicable law.

COUNT III

26. Plaintiff hereby realleges paragraphs 1 through 25 as if fully set forth herein.

27. Under regulations issued pursuant to the Clean Water Act and the River and Harbor Act, the Corps, in considering a permit application, is required to base its decision on an evaluation of the probable impacts on the public interest including cumulative impacts of the proposed activity and its intended use. 33 C.F.R. § 320.4(a).

28. These regulations require the Corps to consider affirmatively:

(a) the relative extent of the public and private need for the proposed structure or work;

(b) where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work; and

(c) the extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work may have on the public and private uses to which the area is suited. 33 C.F.R. § 320.4(a)(2)(i-iii).

29. The Corps' decision to issue a permit for the Project violates these regulations in that the Corps:

(a) arbitrarily and capriciously determined that Virginia Beach's desire for an "autonomous" water source constituted a legitimate need for the Project;

(b) arbitrarily and capriciously ignored plaintiff's proposed alternatives of (a) regional cooperation combined with use of ground water and (b) indirect reuse of municipal water supplies; and

(c) failed to give reasonable consideration to the cumulative impacts which the Project may have on public and private uses in the Roanoke River Basin.

COUNT IV

30. Plaintiff realleges paragraphs 1 through 29, as if fully set forth herein.

31. Section 307 of the Federal Coastal Zone Management Act provides an opportunity for States, such as North Carolina, which have approved coastal zone management programs, to manage their own coastal resources. This provision requires the federal government to conduct all activities having a direct effect on a State's coastal resources in a manner which is consistent, to the maximum extent practicable, with the approved State program or plan for coastal zone management. Any applicant for a required Federal license or permit to conduct an activity affecting land or water uses in the coastal zone of a State that has an approved

coastal zone management program must provide, in the application to the licensing or permitting agency, a certification that the proposed activity complies with the State's approved program and that such activity will be conducted in a manner consistent with the coastal zone management program. The applicant must furnish to the State or its designated agency a copy of the certification, with all necessary information and data. 16 U.S.C. § 1456(c)(3). Each Federal agency conducting or supporting activities directly affecting the coastal zone must conduct or support those activities in a manner which is, to the maximum extent practicable, consistent with approved State coastal zone management programs. 16 U.S.C. § 1456(c)(1). Federal license and permit proceedings having such a direct effect cannot proceed until the affected State concurs that the proposed project is consistent with its plan.

32. The Corps' own regulations prohibit the issuance of any permit for activities affecting the coastal zones of States having a coastal zone management program unless the Corps first evaluates the proposed activity for compliance with the State's coastal zone management program and the appropriate State agency has concurred with certification provided or has waived its right to do so. 33 C.F.R. § 320.4(h); 33 C.F.R. § 325.2(b)(2)(ii); 33 C.F.R. 230.25(4).

33. The State of North Carolina has included in its approved Coastal Zone Management Program a provision to review

those federal activities in the nature of, and including, the Corps' permit issued to Virginia Beach for the Project.

34. On January 4, 1983, the Governor of North Carolina sent defendant Hudson a written request to require Virginia Beach to issue a certification of consistency pursuant to section 307(c)(3) of the Coastal Zone Management Act and 15 C.F.R. § 930, Subpart D. On January 4, 1983, the Governor of North Carolina also sent a letter to defendant Hanson requesting that he make a consistency determination pursuant to section 307(c)(1) of the Coastal Zone Management Act and 15 C.F.R. § 930, Subpart D.

35. Virginia Beach never provided North Carolina with a certification of compliance of the Project with North Carolina's Coastal Zone Management Program.

36. On January 9, 1984, the Corps issued a permit to the City of Virginia Beach for construction of the Project without complying with the consistency review procedures of 15 C.F.R. § 930, Subparts G and H -- indeed, without even responding to North Carolina's requests for a consistency determination.

COUNT V

37. Plaintiff hereby realleges paragraphs 1 through 35 as if fully set forth herein.

38. Kerr Reservoir is an artificial impoundment located immediately upstream from Lake Gaston and separated therefrom by the John H. Kerr Dam ("Kerr Dam").

39. The construction of the Kerr, Gaston and Roanoke Rapids Reservoirs was authorized by Congress pursuant to the Flood Control Act of 1944, 33 U.S.C. § 701-709, for the limited purposes of (1) flood control, (2) hydroelectric power generation, and (3) low-flow regulation on the Roanoke River.

40. The Project requires the Corps to reallocate storage of at least 10,200 acre-feet of water in Kerr Reservoir to support the proposed withdrawal from Lake Gaston.

41. A reallocation of this water for municipal water supply will seriously affect the purposes for which the Kerr Reservoir was constructed and therefore must be approved by Congress. 43 U.S.C. § 390b(d).

42. Because Congress has not approved the reallocation of storage at Kerr Reservoir, such a reallocation violates 43 U.S.C. § 390b(d).

COUNT VI

43. Plaintiff realleges paragraphs 1 through 42 as if fully set forth herein.

44. Under Section 401(a)(2) of the Clean Water Act and the Corps' own regulations, 33 C.F.R. § 325.2(b)(1)(i), the Corps may not issue a permit to Virginia Beach, until the Administrator of the Environmental Protection Agency ("EPA") determines whether the Project may have an effect on water quality in North Carolina

and, if so, gives North Carolina an opportunity to request a hearing on the water quality issue.

45. Under Section 401(a)(2) of the Clean Water Act and the regulations of both EPA and the Corps, 40 C.F.R. § 121.13, 33 C.F.R. § 325.2(b)(1)(i), EPA must make such a determination within thirty days of its receipt of Virginia Beach's application to the Corps and the related water quality certification from the Virginia Water Quality Contract Board.

46. The Virginia State Water Control Board modified its water quality certification for the Project on January 9, 1984. Accordingly, the thirty day period for EPA's determination could begin to run no earlier than January 9, 1984 -- the day the Corps issued its permit to Virginia Beach.

47. Additionally, EPA is considering supplemental information with respect to the Project's effect on water quality in North Carolina. Accordingly, any assumption by the Corps that EPA has determined that the Project has no effect on water quality in North Carolina is arbitrary and capricious.

48. North Carolina is entitled to receive a determination from the EPA on the water quality issue so that it can request a water quality hearing.

49. The Corps' issuance of a permit unlawfully deprives North Carolina of its right to a water quality hearing in

violation of Section 401(a)(2) of the Clean Water Act and 33 C.F.R. § 325.2(b)(1)(i).

COUNT VII

50. Plaintiff hereby realleges paragraphs 1 through 49 as if fully set forth herein.

51. The Corps' own regulations require district engineers to refer permit applications to the division engineer for resolution when the recommended decision is contrary to the written position of the Governor of the State in which work will be performed or when there is substantial doubt as to authority, law, regulations, or policies applicable to the proposed activity. 33 C.F.R. § 325.8(b)(2) and (3).

52. Defendant Hudson granted a permit for construction of the Project on January 9, 1984, predicated upon the performance of work in North Carolina (the reallocation of storage space at Kerr Reservoir, a federal facility partially located in North Carolina), despite the fact that the decision to grant the permit was contrary to the written position of the Governor of North Carolina.

53. Defendant Hudson granted a permit for construction of the Project despite ample evidence in the administrative record raising substantial doubt as to the Corps' authority to issue the permit under Federal and State law.

54. At no time did Defendant Hudson refer the permit application for the Project for resolution or review to Brigadier General Thomas A. Sands, Division Engineer for the North Atlantic Division of the Corps, or Brigadier General Forrest T. Gay III, Division Engineer for the South Atlantic Division.

55. Issuance of a permit for the Project without regard for the Corps' regulations concerning mandatory review of permit applications by higher authorities within the Corps constitutes agency action that is unreasonable, arbitrary and capricious, an abuse of discretion and contrary to law.

WHEREFORE, plaintiff prays that this Court enter an Order:

A. Declaring that the permit issued by the Corps to the City of Virginia Beach for the Project is null and void and of no effect;

B. Directing defendants to revoke the permit issued to the City of Virginia Beach;

C. Awarding plaintiff its costs and reasonable attorneys' fees incurred in connection with this action pursuant to Section 204(a) of the Equal Access to Justice Act, 28 U.S.C. § 2412; and

D. Granting such other and further relief as the Court may consider appropriate under the circumstances.

DATED: January 12, 1984

Respectfully submitted,

STATE OF NORTH CAROLINA

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Mr. ROE. Please proceed.

TESTIMONY OF HON. RUFUS L. EDMISTEN, ATTORNEY GENERAL FROM THE STATE OF NORTH CAROLINA

Mr. EDMISTEN. Mr. Chairman, members of the committee, we will not go into a big legal brief.

Congressman Valentine is also my Congressman. I thank him. I have been very interested this morning in all that has gone on. We have filed a lawsuit in this matter and I do wish that Colonel Hudson were here. I do not think that would effect the lawsuit whatsoever

I am not going to read my statement, but I am going to talk about some things that have not been talked about this morning.

I want to point out that the National Environmental Policy Act was passed for a very specific reason and it said this, it said when there is any question, rule in favor of protecting the environment.

Now, I will be very honest with you, this has been a very hasty action on the part of the corps. Congressman Valentine was at the hearings. I recall that during those hearings there were literally thousands of people there and it was very plain to all of us who appeared at those hearings that the corps did not wish to listen to those citizens from North Carolina and Virginia who opposed the issuance of this permit.

I do not like lawsuits. We filed a lawsuit because that is the only way we have been able to get the Corps of Engineers to listen to us, members of the committee. I want to bring something up that happened about 10 years ago. I was very honored to be a staff member with Senator Sam Ervin, for almost 10 years At one time, the Federal Power Commission granted some permits to the Appalachian Power Commission to dam up literally tens of thousands of acres of land on the New River which was in North Carolina and Virginia. It is the second oldest river in the world.

A great many of us thought that action was very hasty. We decided that the Congress could do something about it and everyone said that that would be a precedent shattering. It would be a terrible precedent, you should not do that. I recall very well that the House of Representatives began their proceedings and they decided that the Appalachian Power Co. would not be allowed to dam up literally tens of thousands of acres of beautiful farmland that had existed for centuries, with farmers living on it, to supply power to States that were sometimes 2,000 and 3,000 miles away.

So there is ample precedent for the Congress taking action when they think it is necessary. The Congress simply said that the New River would be designated as a national wild and scenic river and that was it. And I remind the committee that during that controversy thousands of acres of land had been bought already by Appalachian Power Co., but the Congress decided we are not going to let that happen.

I was very interested, too, that the first speaker from the corps said that they are trying to effectuate regulatory reform. Well, that somewhat intrigues me. I have been a leader in North Carolina effectuating regulatory reform. I have worked with this administration in doing that. But you do not use regulatory reform as an

excuse to not listen to people who have very legitimate concerns about a project that is going to affect over one-half million people.

Now, I know that our Congressman Tim Valentine just said that we hold no malice toward Virginia Beach or all these fine people back here; however, they are getting a very good deal at the expense of North Carolina and the citizens of southside Virginia.

The corps has seemed bent in some sort of a rush to make this thing go through so quickly that we have had no time to really respond adequately. I do not think that is fair. I think that when you get right down to it, that our last hope is you sitting here on this committee and that you can say, "Look, we do not want to have to go through a long drawn-out legal process." We will be spending tens of thousands of dollars, the corps will be spending tens of thousands of dollars to do one thing only, and that is exactly what Congressman Tim Valentine said, to get the corps to do what they should have done in the very beginning.

Eighteen months at the outset—the highest amount of time that they said they would need to conduct an environmental impact statement. Well, Virginia Beach says they do not even really need the water until 20 years from now, and, to create an independent water supply, that does not seem very pressing to me.

It points out to me very strongly that we should not always have to go to the courts to decide these issues and tax the resources of different States and pit State against State. All we are asking is for you to reaffirm what the National Environmental Policy Act says, and that is simply this, give us an honest down-to-earth environmental impact statement and we will be satisfied.

Thank you.

Mr. ROE. Very good.

Are there any questions of the gentleman?

Mr. VALENTINE. I do not have any questions, I just want to thank my friend, the distinguished attorney general from North Carolina, for his interest in this matter.

He has been very effective and very helpful.

Mr. ROE. The gentleman from California.

Mr. PACKARD. Just one question, Mr. Edmisten.

Has there been an attempt to stay the process until it the court question is resolved?

Mr. EDMISTEN. In our lawsuit, Mr. Packard, we have asked for injunctative relief. That was after the permit was issued and at the moment there is no other immediate controversy that we can ask for a stay.

Mr. PACKARD. With the permit issued, what are the options then of the project?

Mr. EDMISTEN. Well, to be very honest with you, I do not think much will happen with our lawsuit pending, because you have bonding processes. You will have all sorts of things that have to happen, and my argument, Mr. Packard, is that you could set this matter right by demanding an environmental impact statement. We are sort of at a standstill and it is taxing everybody needlessly.

Mr. PACKARD. That is the reason for the question.

Is the delay of 6 to 18 months that the Governor referred to, if they wait for an environmental impact statement, a delay that in

your perception, will be in existence waiting for litigation to take its course?

Mr. EDMISTEN. Congressman, you just hit the nail right on the head. Nothing is going to happen in my legal opinion, anyway. And why do not they just get on with it and do a full environmental impact statement because nothing is going to happen anyway.

Mr. PACKARD. Thank you.

Mr. EDGAR. Mr. Chairman.

Mr. ROE. The gentleman from Pennsylvania.

Mr. EDGAR. I apologize for coming in late to the discussion. I did read the materials and understand, I think, the issue, and just wonder if you could summarize in just a few sentences your feeling as to why the corps did not act on the proper procedure with the environmental impact statement?

Mr. EDMISTEN. You know, Congressman Edgar, I am at a total loss.

I have dealt with literally thousands of environmental impact statements, both when I worked here with Senator Ervin, or as Attorney General for 10 years. And for a project of this magnitude, I am at a total loss to know why in the very beginning they did not say, look, we are going to err, we will err in favor of a national policy, which says issue an environmental impact statement. If I knew that answer, then I would not have had to file a lawsuit.

I cannot answer that because I do not know, Congressman.

Mr. EDGAR. Let me ask one other question.

Can you think of any other areas of the country where there is a similar issue at stake in terms of use of water?

Mr. EDMISTEN. I would say that is the most pressing problem in America, all over the country. But I do not know of a project anywhere in this Nation, of this magnitude, where they are not now preparing an environmental impact statement.

Let me give you an example here. Their so-called environmental assessment is this amount of paper here, and I do not mean to be flippant, but I think a good ninth grader could write this. In our State, I have had my office prepare environmental impact statements that would be that high sitting on this table, from projects that were nowhere near the magnitude of this.

This is their entire assessment, Congressman. They take the striped bass thing, everybody laughs about the striped bass. That is an important thing, and they answer that in one sentence.

Mr. EDGAR. Is there any indication of that few pages of documentation has been shared with any other Federal agency?

Mr. EDMISTEN. The only reference that I can find is to the Fish and Wildlife Service, that is all I can find.

EPA is still studying it. In fact, they issued their permit before EPA had a chance to say what they wanted to say on it.

Mr. EDGAR. I thank the gentleman.

Mr. ROE. Mr. Stangeland.

Mr. STANGELAND. For the benefit of my colleagues, I raised that question with the corps and would advise that the National Marine and Fisheries, Fish and Wildlife, and EPA, all had the initial environmental assessment papers, the final environmental assessment and the final draft and did not object.

Mr. EDGAR. Is the gentleman correct that it is only those few pages that they have had?

Mr. STANGELAND. That is right.

Mr. ROE. I want to thank you very much for your valid testimony.

We appreciate your being with us this morning.

The Chair will now recognize our distinguished colleague, the Honorable Bill Whitehurst, who will be sitting in a panel with Senator Paul Trible, Senator John Warner here, and Gov. Charles Robb.

The full text of your prepared statements will apear in the record at this point.

[Statements referred to follow:]

STATEMENT OF HON. G. WILLIAM WHITEHURST, GASTON WATER SUPPLY PROJECT HEARINGS

Mr. Chairman, members of the subcommittee, I appreciate the opportunity to come before you and introduce to you the Virginia Beach officials who are here today to testify.

As reflected by the attendance of Members of the Senate, the House, two Governor's offices, and various municipalities, this is not just another pipeline. To those of us in Virginia Beach, it is, if you will, a lifeline.

Without this water, the Commonwealth's largest and fastest growing city will literally die of dehydration.

That may sound quite dramatic, but the situation the city finds itself in is nothing short of perilous. Three years ago there was a searing heat wave that brought about a debilitating drought. Not only were there numerous hardships on the residents, of southeastern Virginia, but the burden was shared by businesses and, especially, tourists on whose trade my district depends so heavily.

I would like, however, to take this subject out of the arena of parochialism, and move it into the areas of need, equity and alternatives.

Testimony today from the Army Corps of Engineers, and from Virginia Beach's expert on the subject, Aubrey Watts, will leave you with no doubts that this project is as vital as any can be to a city.

I, too, can bear witness to the manner in which the city went about finding a solution to its problem of insufficient water supplies.

Since 1976 when the city first began exploring options to meet its projections of 60 million gallons per day, numerous ideas and locations were reviewed and evaluated. Not only were the project's costs and feasibility weighed, but particular importance was placed on making the final choice an environmentally safe one.

Following years of study, the Lake Gaston option was selected because it met all the criteria of supply, economy and environment.

It is not surprising, then, that after years of careful work—as reflected in the thousands of pages of documentation—that the city of Virginia Beach, its regional neighbors, the Commonwealth of Virginia and the Army Corps of Engineers all agreed that Lake Gaston was the proper choice.

From the time when Virginia Beach officials settled on this plan, those of us closely involved have asked that the corps make its final judgment based on facts, and only on facts. We are satisfied that the corps acted in the finest tradition of professionalism, and remained uninfluenced by the political winds swirling about it.

This non-partisan approach can only succeed in an atmosphere of complete confidence in the integrity of the corps and its engineers. What particularly stands out in my mind is the number of hearings held on this project. Since 1976, 16 hearings or public meetings have been held on the problem of water supplies for southeastern Virginia!

The corps listened to hours of testimony, and reviewed volumes of documentation, before concluding that this was the only viable option for Virginia Beach.

Let me add, in closing, that the city's patience is remarkable, despite the heavy burden that hangs over its head. It is costing the city approximately $1 milion for every month that the project is delayed. This is due to rising construction materials costs, inflation rates over the length of the project, and labor costs.

There is a time and a place for everything, and this is the time to commence with the building of this project. It is not a time to invoke needless delays.

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I could continue talking about the many reasons why I fully support this project, but for the sake of time, I will yield to Aubrey Watts, Public Utilities Director from Virginia Beach, Mayor Louis Jones, and City Manager Thomas Muehlenbeck.

Thank you, Mr. Chairman, for this opportunity to testify before the subcommittee.

STATEMENT OF GOV. CHARLES S. ROBB

Good morning, Mr. Chairman, members of the Committee, distinguished guests, ladies and gentlemen.

I am here this morning to represent the Commonwealth of Virginia in the matter of whether an environmental impact statement should be prepared before the City of Virginia Beach may begin work on its Lake Gaston Water Supply Project. That work, as you know, would commence under the conditions of a permit which has been issued by the Army Corps of Engineers, and when completed, would carry water from Lake Gaston through a buried pipeline for about eighty four-and-a-half miles to the Tidewater area. This pipeline is essential as a future source for supplying additional water to meet the projected needs of the Cities of Virginia Beach, Chesapeake, and Franklin, and the County of Isle of Wight. The total withdrawal from Lake Gaston through the pipeline would be a maximum of 60 million gallons per day.

I have come this morning to tell you that although we are in complete agreement with the worthy purposes served by the environmental impact statement process that now exists under the National Environmental Policy Act of 1969, we believe that the Army Corps of Engineers has already correctly determined, from this review, that no further environmental impact statement is required for the Lake Gaston project. We are also convinced that the Corps of Enginers has properly and fully carried out the environmental impact review required by the Environmental Policy Act of 1969. Further, we believe, as does the Corps of Engineers, that the environmental consequences of this project have not, and cannot, be shown to be significant in the sense that the National Environmental Policy Act requires in order to mandate the preparation of an Environmental Impact Statement. Moreover, we believe that requiring such a document would be highly unproductive for the federal government, as well as unnecessarily and financially burdensome to the City of Virginia Beach, and potentially harmful to the well-being of both the City and the state.

I would like to take a few minutes of your time to elaborate on the reasons that have prompted this conclusion.

First, the Corps of Engineers has thoroughly documented its compliance with the Act with respect to the Corps' conclusion that no significant environmental impact will result from this project. The Act requires that, in the case of any action including permit determinations that may have a significant impact, that the federal agency must determine significance through an analysis of the context and intensity of the action as explained in the Act's regulations. A look at the Corp's Final Environmental Assessment and finding of No Significant Impact shows clearly that the Corps completed a very careful analysis. The project's impact upon the environment would be temporary and minor. While the project is controversial and many people perceive it could have negative social and economic consequences, these perceptions, especially when unsubstantiated, cannot and should not be the basis for any conclusion that the project is environmentally unsound. The risks are neither unique nor uncertain; the effects upon farmland, upon historic and cultural resources, upon wildlife, and even endangered species, and upon other environmental areas will be minimal. The project would in no way impair compliance with any environmental protection laws or requirements. It would not adversely affect public health; quite the contrary, it is intended to help insure a reliable supply of safe drinking water. The Corps analysis reflects months of study. I commend it to your attention. Agencies of the Commonwealth with diverse responsibilities for, among other things, drinking water safety, air and water quality, fisheries management, and transportation, have given this project thorough analysis over the last year. All agree with the findings of the Army Corps of Engineers.

It can be stated fairly and completely that all aspects of the project which could possibly have any impact upon the environment have been addressed with great care by the City of Virginia Beach, the Commonwealth, and the Corps. As you know, the major controversies over this project revolve around the effect it allegedly would have on the water levels in Lake Gaston and the Kerr Reservoir. Without going into burdensome detail, let me restate for the record that the Corps of Engi-

neers already controls the water levels in those lakes for a variety of purposes under applicable laws. The Corps has determined that the worst-case drawdown attributable to water intake in the completed pipeline would be two-tenths of a foot. That is about two-and-a-half inches, against a background of much greater existing variation.

Opponents of the project have also raised the issue of downstream water quality in an effort to question the pipeline's development. The maximum pipeline withdrawal of 60 million gallons a day would represent 1.2 percent of the average river flow at Roanoke Rapids. Even under worst-case conditions, downstream river flows would not be affected by this project because of the management regime already imposed on the system by the Corps and by other federal agencies. Thus, the lake level and the water quality effects of this project would be negligible and insignificant.

The City of Virginia Beach has designed the pipeline, and the Virginia State Water Control Board has imposed the requirement that maximum withdrawal of water from Lake Gaston cannot exceed 60 million gallons per day. That figure is a maximum, not an average. And we have analyzed the effects of that maximum withdrawal and found them to be insignificant.

The City of Virginia Beach has proposed to route the pipeline so that most of it is along the rights-of-way of railroads or power lines. River crossings have been analyzed by, and will be coordinated with, appropriate state agencies to ensure that precautions are taken to protect stream quality and aquatic life; other state agencies such as the Highway Department and the Historic Landmarks Commission have also worked closely with the City of Virginia Beach to ensure that their interests are well protected.

Our experience with the development of this project—from preliminary analysis and agency coordination, and through three separate document reviews—has convinced me that no amount of honest study, by any objective reviewer, could discover any consequences of this undertaking that have not already been addresed and found insignifiant or without substantiation.

I'd like, however, to take a few more minutes of your time to describe the extensive reviews that we have been through. The City, in conjunction with its application, filed a long and detailed Environmental Report last July. Government agencies at all levels reviewed it; our comments to the Corps in August reflected some minor concerns that were subsequently resolved by the City of Virginia Beach. This Environmental Report was itself as extensive as any complete environmental impact statement, and fell short of EIS requirements in minor particulars only. Some of the discussion was not written to meet National Environmental Policy Act format specifications, although the substantive points required by the Act were, in the main, considered. The Corps of Engineers then held a public hearing in Lawrenceville, Virginia, in connection with the review of this document.

Next, the Corps issued its own Finding of No Significant Impact and Environmental Assessment in October, 1983, and announced two public hearings in November. The Corps of Engineers even went one step beyond its usual practice in issuing this document first as a draft, then as a revised final document in December. Comment periods were 30 days in each case. The November hearings—first in Roanoke Rapids, North Carolina, and then in Virginia Beach—provided additional opportunities for public participation. Attendance was high and interest was great. The public hearing requirements associated with an Environmental Impact Statement were actually exceeded, as were the review opportunities.

It is for these reasons that I suggested at the beginning of my testimony that adding an Environmental Impact Statement to the process at this point would be highly unproductive. Preparation for and review of an impact statement for this project would add six to eighteen months of additional, unnecessary time in repetitious analysis, thereby delaying construction and costing the City of Virginia Beach millions of dollars by virtue of the postponement. Meanwhile, the beginning date for the project's actual use, which is expected to be about ten years after construction starts, would be delayed as well, leaving a city of national significance open to severe difficulties in the event of a water shortage.

One more point is worth mentioning. The City, the state, and the Corps have all conducted extensive studies of possible alternatives for supplying Tidewater Virginia with drinking water. The fact is that the groundwater supply there cannot be relied upon indefinitely. Hence, regional arrangements for sharing can only accomplish a limited goal. More water is needed for a city that already has the strictest water conservation ordinances in the Commonwealth.

In summary, we are convinced that the Lake Gaston water supply project for Virginia Beach will not cause any significant or adverse impact upon the environment. We believe the Corps of Engineers' Finding of No Significant Impact is fully justi-

fied. Therefore, we believe that no environmental impact statement is necessary under the National Environmental Policy Act for this undertaking.

Moreover, we believe that the extensive documentation of the impacts of this project, together with extensive governmental and public review of same, have rendered a formal EIS, if one were to be required, superfluous, and thereby wasteful. Additional delay of this vital project would needlessly threaten the water supply, and consequently the health and well-being of the citizens of Southeastern Virginia. We hope, therefore, that you will allow the project to proceed without a formal impact statement.

Thank you.

COMMONWEALTH OF VIRGINIA,
OFFICE OF THE GOVERNOR,
Richmond, Va., January 6, 1984.

Col. Ronald E. Hudson,
District Engineer, U.S. Army Corps of Engineers,
Norfolk, Va.

DEAR COLONEL HUDSON: The Commonwealth of Virginia has completed its review of the Final Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) concerning the Section 404 permit application for the proposed Lake Gaston Water Supply Project for Virginia Beach. It is the position of the Commonwealth of Virginia that the project will not give rise to any significant impacts upon the environment; that it will meet imminent as well as long-term needs of the Tidewater area for fresh water; and that the Section 404 permit for the project should be issued expeditiously.

Details of our position have been given at length in the Council on the Environment's letters to you of August 25 and November 7. The Commonwealth's position on the merits of this project has been stated in your public hearings of August 25 and November 17. We do not believe anyone, including the State of North Carolina in its correspondence to you dated November, 23, has made a persuasive technical or legal argument against it.

Nonetheless, we are providing additional analysis of the project in response to the Final EA and North Carolina's criticisms. These additional comments are attached.

Sincerely,

CHARLES S. ROBB.

COMMENTS OF COMMONWEALTH OF VIRGINIA ON LAKE GASTON WATER SUPPLY PIPELINE FOR VIRGINIA BEACH

As the Final Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) clearly demonstrate, the proposed Lake Gaston Water Supply project would not give rise to significant impacts upon the human and natural environment. Because of concerns that have arisen over the accuracy of this determination, we wish to address ourselves at length to several of its components.

WATER SUPPLY ACT OF 1958

North Carolina asserts that issuance of the Section 404 permit without prior Congressional approval would contravene Section 301(d) of the Water Supply Act of 1958 (pages 3-6, North Carolina comments of 11/23/83). There are two aspects to this assertion: (1) that the Gaston withdrawal of 60 million gallons per day (MGD) would "seriously affect the purposes for which the Kerr Reservoir project was originally authorized;" and (2) that the Gaston withdrawal would involve "major operational changes" to the Kerr Reservoir.

The first allegation does not reflect the rules of interpretation used by the Wilmington District. We are informed that the purposes for which the reservoir was authorized are not seriously affected unless a withdrawal claims 50,000 acre-feet of reservoir storage capacity or else 15% of that capacity, whichever is less. In the case of Kerr Reservoir, the 50,000 acre-feet figure is the lesser of the two amounts. The reallocation in Kerr as a result of the Gaston withdrawal will account for only 10,200 acre-feet of storage and is thus not a proposal that would "seriously affect project purposes" according to the Wilmington Corps.

Secondly, in regard to major operational changes, it should be noted that no variation of the present schedule of minimum releases is contemplated as a result of the 60 MGD withdrawal. The water going to the Lake Gaston pipeline will come from

peaking operation of the Kerr Dam. In the event of a drought during the latter part of the striped bass spawning season, Kerr Reservoir would have to be drawn down somewhat to keep a flow of 6000 cubic feet per second going over Roanoke Rapids Dam. However, the worst-case effect on water levels would be .2 foot, or 2.4 inches, as the Final EA indicates on page 3. Thus, there would not be a change in the power generation scheme at Kerr.

North Carolina also claims that the fact that Vepco will be reimbursed annually by Virginia Beach for storage capacity indicates a serious effect on Gaston and Roanoke Rapids power generation facilities (N.C. page 8). We believe that the question of whether Vepco will be harmed in any way by this project would have been answered in the affirmative by Vepco in the course of two document reviews and three public hearings if, in fact, Vepco perceived its own interests to be at risk. Vepco has not offered comments on this matter except in answer to a specific technical question regarding whether they can accommodate the project by controlling releases from the Gaston and Roanoke Rapids Dams (see page 4, footnote 5 of Final EA).

North Carolina also claims that the Kerr, Lake Gaston, and Roanoke Rapids reservoirs were created for the purposes of flood control, hydroelectric power generation, and low flow regulation. They cite House Document No. 650 as the basis for this claim (N.C. pp. 4-5). However, paragraph 220 of that Document contemplates that these reservoirs may serve "other beneficial purposes," and paragraph 218 indicates that water supply may be a proper purpose of some reservoirs in the Roanoke River Basin.

We conclude from the above analysis that North Carolina's claims with respect to the Water Supply Act of 1958 are without merit.

CONTEXT AND INTENSITY OF PROPOSED ACTION AND IMPACTS

The National Environmental Policy Act (Pub. L. 91-190) (NEPA) requires considerations of context and intensity in determining whether a proposed federal action (or, in this case, federally permitted action, 40 CFR section 1508.18(b)(4)) will have significant impacts upon the environment. We believe that your FONSI and Final EA satisfactorily reflect these considerations in coming to its conclusion that no significant impact is likely to result from construction and operation of the Lake Gaston project.

North Carolina asserts that the Lake Gaston project would establish a precedent for future water withdrawals by either Virginia Beach or other localities interested in enlarging their water supplies in the future. In support of this contention, it is argued that (1) existing water withdrawals by Roanoke and South Hill, and Henderson, North Carolina are on such a small scale compared to what is proposed for Lake Gaston as not to constitute a precedent, and (2) that the Lake Gaston determination will prejudice decisions on future water withdrawal considerations. Passing over, for the moment, the demands that North Carolina users are making or plan to make on the same river basin, it should be stated that North Carolina cannot have the precedent argument both ways. We do not believe that the Lake Gaston project sets a precedent just because it is larger in scale than existing municipal withdrawls. Moreover, no specific information is offered to support the contention that "several municipalities have already expressed an interest in applying for additional water on the basis of Virginia Beach's proposal." (N.C. p. 12)

However, if precedent is at issue, North Carolina is in a poor position to complain about precedents on the Virginia side of the Roanoke River Basin (N.C. pp. 10-12) since consumptive uses and out-of-basin transfers of water not only result from municipal uses by Henderson, Oxford, and Soul City but also occur because of power generation and paper manufacturing activities. In North Carolina's portion of the Roanoke River Basin, the combined evaporative loss from Duke Power Company, Carolina Power and Light, and paper manufacturing amounts to 86 MGD. It is difficult to see why a 60 MGD withdrawal from the Basin is an overwhelming amount of water in the circumstances, especially when 60 MGD represents only 1.2 percent of the average flow at Roanoke Rapids.

We further believe that the discussion on page 5 of the Final EA supports the conclusion that adverse effects of the project upon Pea Hill Creek and downstream water quality would be minimal. As indicated, the withdrawal from Lake Gaston would cause an increase of about 6 percent in the amount of water entering the lower reach of Pea Hill Creek from Lake Gaston, and that Lake Gaston water is generally of slightly lower quality than that of Pea Hill Creek. Since this water quality relationship is sometimes reversed and, in any event, is not a large difference, the conclusion of the minimal extent of impact on Pea Hill Creek from this project is well taken.

The arguments of project opponents over this essential water quality issue are limited to a demand that you examine impacts of a much larger withdrawal than 60 million gallons per day on the assumption that one might develop (N.C. pp. 17–18—), and that future recreational and agricultural development would be inhibited by the necessity of protecting Virginia Beach's raw water supply. Thus North Carolina does not dispute the proposition that project impacts on Pea Hill Creek water quality will be insignificant. Its point, that you should examine a larger withdrawal because the pipeline could carry more than 60 MGD, is not well taken because the three pumps proposed to be installed would have to be exchanged for larger ones in order to exceed 60 MGD. Moreover, it should be noted that this maximum will not be exceeded; the City has asked the State Water Control Board to amend its Section 401 Certification, the following condition of which is pertinent here:

"(1) The withdrawal rate shall not exceed 60 million gallons per day."

Further restrictions in the allocation of water will be specified in both the reallocation contract between the City and the Wilmington District of the Corps of Engineers and in the modification of the Federal Energy Regulatory Commission license for Vepco, which is in the process of being developed. In our judgment, therefore, there is no need for you to do an impact analysis on a speculative, unpermitted contingency.

The argument concerning prohibitions on future development stemming from Virginia Beach's desire to protect its source of drinking water (N.C. p. 17) is nothing less than an assertion of the right to pollute. We do not agree with this argument. For its part, Virginia intends to accommodate growth, in the Roanoke River Basin and in Tidewater, in an environmentally sensitive way. We believe that judicious use of NPDES permits, Section 401 Certifications, and Best Management Practices to control nonpoint source pollution, can allow growth to occur in the Roanoke River Basin at the same time as the water supply needs of Tidewater are met.

The Final Environmental Assessment indicates that the impact on lake levels at Kerr Lake would be insignificant, amounting to as much as .2 (2/10) foot of additional drawdown in the worst case, according to the Wilmington District, which controls Kerr Lake operation (Final EA, p. 3). Thus, we do not think that you have "ignored the serious injury to Kerr Lake that is likely to occur due to further reductions in its water level" (N.C. p. 18). Rather, by North Carolina's own admission, the lake levels have not been maintained above 293 feet because of actions by the Wilmington Corps (N.C. p. 19). This relationship of lake levels to Wilmington Corps operation is a fact of lake operation which exists before Virginia Beach's proposed withdrawals and would be affected only slightly—.2 to 1.2 feet, depending on the source of the determination—by the proposed withdrawal. It is not Virginia Beach's responsibility, or that of the Norfolk District, to create conditions in Kerr Lake more favorable to summer recreation than those already in existence and under Wilmington Corps jurisdiction.

DOWNSTREAM WATER QUALITY IMPACTS

For purposes of this discussion, we will follow the outline used by North Carolina in it comments: impacts on bass fishery, impacts on downstream flow of Roanoke River, the irrigation needs of the lower Roanoke River, and impacts of Albemarle Sound (N.C. pp. 20–26).

It is argued that the pipeline would have significant adverse impacts on bass fisheries and spawning (N.C. pp. 20–21). We concur in your conclusion that a one-to-two day reduction in water releases over Roanoke Rapids Dam, which is the worst-case reduction in flow attributable to the Gaston withdrawal (page 7 of the Final EA), would not be significant from the standpoint of the bass fishery. Further, we are advised that the letters on this subject which you received from federal agencies (N.C. p. 21), merely recommended further studies of project impacts on downstream spawning and did not object to issuance of a permit for the project. Further, we understand that some of these letters were written before the Draft EA was published and, consequently, did not even relate to the proposed action on the Section 404 permit.

In regard to the Roanoke River, North Carolina expresses its concern that the Virginia Beach withdrawal of 60 MGD from Lake Gaston would "significantly affect" downstream low flows (N.C. p. 21). An average reduction of 1.23 in the flows is claimed. This amount is in substantial accord with the 1% that the Final EA indicates would result from the project (page 5). However, the proposed withdrawal will not affect the 7-day, 10-year low flow (7Q10) conditions for the Roanoke River at all since flows to the river from lake Gaston will be maintained through regulation of Kerr Lake. Because NPDES discharge permit limitations are based upon low flow

conditions which are governed by the FERC license and will not change as a result of Virginia Beach's withdrawal, the North Carolina concern about lower Roanoke River water quality impacts, and the concomitant hindrance to agricultural and industrial growth, appears to be irrelevant.

In regard to future irrigation needs of the lower Roanoke River Basin, North Carolina appears to have been inconsistent in its projections. According to page 8 of the Final EA, the North Carolina Department of Natural Resources and Community Development predicts that maximum increased needs for irrigation in the Roanoke Basin and a portion of the Tar River Basin will amount to 56.4 MGD for the year 2030. However, in the comments of November 23, North Carolina projects that lower Roanoke Basin agricultural needs will peak at 375 MGD in summer months by the year 2020 (N.C. pp. 23-24). If any projected need will jeopardize the assimilative capacity of the lower Roanoke or impair its sufficiency for irrigation use, it appears to be North Carolina's demand for 375 MGD and not the Lake Gaston project demand of 60 MGD. The latter represents between 1.1 and 1.3 percent of the average flow at Roanoke Rapids.

Finally, on pages 24 and 25 of its comments, North Carolina claims that the Corps did not address potential project impacts on Albemarle Sound. We agree that the draft EA did not address these impacts; but the Final EA discussed them on page 5 and pointed out that Albemarle Sound water quality would not be affected significantly since the flow of the river is regulated and the Gaston withdrawal represents about ½ of one percent of the average freshwater inflow to the Sound. Even North Carolina concludes that no significant saltwater intrusion would take place under current flow regulation patterns (see p. 5 of Final EA).

CUMULATIVE IMPACTS

We believe that North Carolina has misconstrued the meaning of "cumulative impacts." (N.C. pp. 26-27). "Cumulative impacts" is defined in the NEPA regulations (40 CFR Part 1500) as the effects resulting from the addition of the proposed action to other "past, present, and reasonably foreseeable future actions" which can be individually minor but collectively significant (NEPA regulations, section 1508.7). North Carolina does not refer to the addition of this proposed "action" to others preceding or flowing from it. Rather, the focus in on the "diverse and substantial adverse effects" of this action upon Peal Hill Creek, Kerr lake levels, Roanoke River flows, and Albemarle Sound ecology

Even if North Carolina's interpretation of "cumulative impacts" were granted, the impacts would not have any significance, because they are at once minor and diverse. The effect upon Pea Hill Creek water quality and fisheries (Final EA, pp. 5-6) cannot be translated into other effects on downstream water quality because the flow at Roanoke Rapids, and the amount of dissolved oxygen released downstream of that dam, are ggverned not by this project but by Vepco's license from the Federal Efergy Regulatory Commission. In addition, the pipeline might cause improvement in pollutant loadings downstream (Final EA, p. 5). Downstream water quality, and that of Albemarle Sound, is affected by industrial pollution in Roanoke Rapids (Final EA, p. 7), if anything. For these reasons, we do not believe that the cumulative effects on water quality and flows attributable to the Lake Gaston project are any more significant than the individual impacts.

REGIONAL SOLUTION ALTERNATIVES

North Carolina argues that you must give serious consideration to "the alternative of a regional solution to the Tidewater supply problem" in preparing an EIS (N.C. p. 32). We have at least two responses to this argument. One is that your finding of no significant impact precludes the application of the requirement in section 1502.14 of the NEPA regulations for an examination of alternatives. The other response is that, even though Section 1502.14 is not applicable to an environmental assessment, your Draft EA discussed alternatives at some length on pages 11-14. The Final EA discusses them on pages 12-15 and states specifically (page 15, subparagraph (6)) that local cooperation and interconnection would not increase the total regional water supply. Virginia Beach's Environmental Report discusses alternatives at length, from The City's point of view, on pages 114-130 and from the State Health Department's perspective on pages I-1 through I-17.

Insofar as the "regional solution" constitutes an alternative proposal, we think that it was entirely fair of you to "summarily dismiss" this notion in the Draft and Final EAs in light of the Purpose and Need paragraph on page 2, which makes clear that an increase in total water supply for the area is needed if good quality water in reliable quantities is to be assured to Southeastern Virginia.

Again, there is no requirement that an EA exhaustively analyze alternatives, such as the vague "regional solution," which do not, on their face, offer at least a reasonable chance of serving the enunciated purpose of the undertaking. Nor is there any such requirement for an EIS; the NEPA regulations state, in section 1502.14 (which is the stringent content requirement concerning alternatives), only that an EIS must "rigorously explore and objectively evaluate all reasonable alternatives and, for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated." We submit that this has been done.

The question of maximizing existing water sources from existing Southeastern Virginia municipalities has been discussed many times in several forums including the North Carolina-Virginia Bistate Committee. Virginia agrees to the estimated projected need of 139 MGD by the year 2030. However, we believe that North Carolina's estimate of existing resources of 124 MGD, excluding groundwater, is erroneous. Surface water resources from the eight Southeastern communities referenced by North Carolina is actualiy about 98 MGD.

One of the primary functions of government is to provide for the health and safety of its citizens. We believe that, in asking Virginia Beach to forego an assured and needed supply of fresh water, North Carolina is making a request in which the health of the citizens of Southeastern Virginia would be put at great risk.

SUMMARY

For all of the reasons stated above, we believe that the North Carolina arguments against the proposed Lake Gaston Water Supply project are without merit and that your Section 404 permit should be issued without further delay.

COMMONWEALTH OF VIRGINIA,
COUNCIL ON THE ENVIRONMENT,
Richmond, Va., November 7, 1983.

Col. WAYNE A. HANSON,
District Engineer, U.S. Army Corps of Engineers,
Wilmington, N.C.

DEAR COLONEL HANSON: The Commonwealth of Virginia has completed its review of (1) the Draft Finding of No Significant Impact (Draft FONSI) concerning the allocation of storage in the Kerr Reservoir to meet a 60 million gallon-per-day water supply need, and (2) the Draft Environmental Assessment prepared by the Norfolk District with respect to the Section 404 permit application by Virginia Beach.

The Council on the Environment is responsible for coordinating the State's review of federal environmental documents and responding to appropriate federal officials on behalf of the Commonwealth. The following agencies have been involved in the review of this project: Commission of Game and Inland Fisheries, Department of Agriculture and Consumer Services, Department of Conservation and Economic Development, Department of Health, Department of Highways and Transportation, Division of Industrial Development, Marine Resources Commission, State Air Pollution Control Board, State Water Control Board, Virginia Historic Landmarks Commission including Virginia Research Center for Archaeology, Virginia Soil and Water Conservation Commission, and Southeastern Virginia Planning District Commission.

It is the position of the Commonwealth of Virginia that neither the Lake Gaston Water Supply Project nor the allocation of storage in Kerr Reservoir to accommodate that project will give rise to any significant impacts upon the environment. Accordingly, we urge that you issue a Finding of No Significant Impact concerning the allocation of storage in Kerr Reservoir without delay.

A copy of our comments to the Norfolk District is attached. Thank you for the opportunity to review your Draft FONSI.

Sincerely,

KEITH J. BUTTLEMAN, *Acting Administrator.*

COMMONWEALTH OF VIRGINIA,
COUNCIL ON THE ENVIRONMENT,
Richmond, Va., November 7, 1983.

Col. RONALD E. HUDSON,
District Engineer, U.S. Army Corps of Engineers,
Norfolk, Va.

DEAR COLONEL HUDSON: The Commonwealth of Virginia has completed its review of the Draft Environmental Assessment and Finding of No Significant Impact (FONSI) concerning the City of Virginia Beach's permit application (No. 83-0747-06) for the Lake Gaston Water Supply Project. The Council on the Environment is responsible for coordinating the State's review of federal environmental documents and responding to appropriate federal officials on behalf of the Commonwealth. The following agencies, as well as the Governor and the Secretary of Commerce and Resources, have been involved in the review of this project. Commission of Game and Inland Fisheries, Department of Agriculture and Consumer Services, Department of Conservation and Economic Development, Department of Health, Department of Highways and Transportation, Department of Industrial Development, Marine Resources Commission, State Air Pollution Control Board, State Water Control Board, Virginia Historic Landmarks Commission including Virginia Research Center for Archaeology, Virginia Soil and Water Conservation Commission, and Southeastern Virginia Planning District Commission.

It is the position of the Commonwealth of Virginia that the project will not give rise to significant impacts upon the environment, and that a Finding of No Significant Impact should be issued expeditiously. We believe, as state officials have stated on several occasions including the August 25 public hearing at Lawrenceville, that the Section 404 permit should be issued without further delay.

The State Water Control Board, the Commission of Game and Inland Fisheries, and the Department of Highways and Transportation had comments concerning the City's Environmental Report. These were reflected in our August 25 letter to you. In a September 6 letter addressed to you and made available to us, the City responded to those comments in a manner that the affected agencies have indicated is satisfactory. We are also informed by the Virginia Historic Landmarks Commission that a number of buildings, not on the National Register of Historic Places but of possible historic value, may be affected by pipeline construction; we would encourage continuation of the City's coordination with the Landmarks Commission on this matter. Apart from this, no new comments have resulted from our review of the Draft Environmental Assessment.

Accordingly, your preliminary FONSI should be made final as soon as possible. In view of the absence of adverse environmental or other effects that can reasonably be attributed to the proposed Lake Gaston Water Supply Project, further delay in issuing the FONSI and the permit serves no public purpose and constitutes an avoidable waste of limited financial resources of three levels of government. Therefore, we urge that the Finding of No Significant Impact and the Section 404 permit both be issued without further delay.

A copy of our comments to the Wilmington District concerning its Draft FONSI on allocation of Kerr Reservoir storage to accommodate this project is attached for your information. Thank you for the opportunity to review this document.

Sincerely,

KEITH J. BUTTLEMAN, *Acting Administrator.*

COMMONWEALTH OF VIRGINIA,
OFFICE OF THE GOVERNOR,
Richmond, Va., September 14, 1983.

Mr. WILLIAM D. RUCKELSHAUS,
Administrator, U.S. Environmental Protection Agency,
Washington, D.C.

DEAR MR. RUCKELSHAUS: The City of Virginia Beach has applied to the U.S. Army Corps of Engineers for a permit to withdraw 60 million gallons of water per day from Lake Gaston for transfer to Tidewater Virginia.

Under the National Environmental Policy Act, the State of Virginia conducted a thorough review of the City's Environmental Report and recommended that the Corps render a finding of no significant impact. Under Section 401 of the Clean Water Act, the State independently certified that this project would not affect water quality.

For reasons which it has made clear in these evaluations and in additional letters to Assistant Secretary of the Army Gianelli and Norfolk District Engineer Hudson, the Commonwealth of Virginia strongly supports Virginia Beach's application for this permit.

It has come to my attention that your Philadelphia and Atlanta Regional Offices are contemplating filing a formal objection to this project with the Corps of Engineers on September 15 on the grounds that it may affect water quality in the State of North Carolina. Such an assertion would be without a legal basis in the face of known facts. Section 401(a)(2) of the Clean Water Act requires a technical finding by the Environmental Protection Agency that water quality may be affected. Yet no evidence has been put forward by staff in either Regional Office or by the State of North Carolina to support any conclusion of adverse impact. No evidence to support such a conclusion was put forward at the Corps' public hearing on this project which was attended by 2500 people.

I urge you to review the record for yourself and to prevent the needless delays that can only serve to escalate the costs of this critical public health project. In the interest of EPA's professional credibility with the American public, I implore you to keep your agency above the political machinations that motivate this project's opponents.

Sincerely,

CHARLES S. ROBB.

COMMONWEALTH OF VIRGINIA,
OFFICE OF THE GOVERNOR,
Richmond, Va, September 7, 1983.

Hon. WILLIAM R. GIANELLI,
Assistant Secretary of the Army for Civil Works,
The Pentagon, Washington, D.C.

DEAR MR. SECRETARY: In Governor Robb's absence from the country, I am writing to express the Commonwealth of Virginia's strong support for the application of the City of Virginia Beach to withdraw 60 million gallons of water per day from Lake Gaston. Application has been made to the Norfolk District of the Army Corps of Engineers for a Section 404 permit to construct the intake structure and pipeline. Virginia believes that the anticipated needs of the Tidewater area of our state, and the minimal environmental disruption occasioned by project construction and operation, adequately justify this project and warrant a finding of no significant impact by the Norfolk District.

Moreover, we are convinced that the effective operation of the extensive military installations in the Tidewater area, so vital to the nation's security, depend upon a reliable and adequate supply of fresh water.

The State of North Carolina has, in a recent letter to you, requested that the Corps require an environmental impact statement for this project. We believe that North Carolina's request is unreasonable and unwarranted, and should be rejected out of hand for the reasons given in my letter of September 6 to Colonel Hudson, the Norfolk District Engineer (attached).

Instead, I have urged Colonel Hudson to render a finding of "no significant impact" and issue the requested 404 permit to the City of Virginia Beach.

You may know that the Commonwealth of Virginia has tried to cooperate with North Carolina on water resource and quality issues that arise from our common boundary. I want to again take this opportunity to restate our intention to work closely with all interested parties in order to assist in the optimal management of this reservoir system in order to continue its balanced use for economic development, agricultural productivity, public health protection, and recreational opportunities.

Cordially,

BETTY J. DIENER.

COMMONWEALTH OF VIRGINIA,
OFFICE OF THE GOVERNOR,
Richmond, Va., September 6, 1983.

Col. RONALD E. HUDSON,
District Engineer, U.S. Army Corps of Engineers,
Norfolk, Va.

DEAR COLONEL HUDSON: As I stated at your public hearing in Lawrenceville on August 25, the Commonwealth of Virginia strongly supports the application of the City of Virginia Beach to withdraw 60 million gallons of water per day from Lake Gaston. Further, we feel that the request by the State of North Carolina that you require an EIS on this project is unreasonable and unwarranted and should be rejected out of hand for the following reasons.

All reasonable alternative water supply sources for Tidewater Virginia have already been thoroughly and publicly assessed. Over thirty-six alternatives for supplying Tidewater's needs for fresh water have been examined in the last several years. Twenty-four of those were believed to have sufficient merit to warrant further examination. Eight of those were fully explored in Virginia Beach's Environmental Report.

The water supply deficit for Tidewater has been objectively established. It has, in fact, been analyzed by numerous organizations in the last several years. The currently anticipated deficit of 60 mgd is even less than the Corps' previous projections for the same planning period. The anticipated deficit is also derived from projections of water use which include conservation requirements more stringent than any adopted in any other parts of the state.

The impact of this withdrawal would be truly insignificant of lake levels. Your own modeling and that of the Wilmington District confirm, for example, that the worst possible impact on lake levels from this project would be an additional drawdown of approximately two and a half inches in the event of a 70-year "drought of record."

North Carolina's future interests, as well as Virginia's are protected since your Section 404 permit would establish enforceable limits on the applicant's withdrawal.

While the project is highly controversial in the Roanoke River Basin, a hearing in the Tidewater area would probably have produced an even greater number of project proponents than were present as opponents in Lawrenceville. Moreover, we feel the extensive public participation strategy employed by the City of Virginia Beach substantially satisfies the requirements of the National Environmental Policy Act. We are also pleased to note the Virginia Beach has already been responsive to public concerns. Both the location of the intake and the pipeline route, for example, were modified in response to expressions of public opinion.

The proposed withdrawal represents only 1% of the average flow of the Roanoke River System.

We have evaluated the differences between an Environmental Assessment and an Environmental Impact Statement and find that all substantive requirements for the EIS have already been met by the applicant's existing Environmental Report except for a detailed comparison of the impacts of alternatives, an analysis of the relationship between local short-term uses of the environment and its long-term productivity, and a discussion of irretrievable commitments of resources. Our feeling is that most of these shortcomings in regard to content are largely a matter of labeling and have, in fact, already been addressed in Virginia Beach's Environmental Report. Additional analysis of impacts would merely strengthen the case for the proposed project since, environmentally, it is the least disruptive of all the possibilities considered. Such additional analysis could, however, significantly delay the project and substantially increase its overall cost.

I again urge you to render a finding of "no significant impact" and issue the requested 404 permit to the City of Virginia Beach.

I also want to take this opportunity to recommit the Commonwealth's intentions to work closely with all interested parties in order to assist in the optimal management of this reservoir system in order to continue its balanced use for economic development, agricultural productivity, public health protection, and recreational opportunities.

Cordially,

BETTY J. DIENER.

COMMONWEALTH OF VIRGINIA,
COUNCIL ON THE ENVIRONMENT,
Richmond, Va., August 25, 1983.

Col. RONALD E. HUDSON,
District Engineer, U.S. Army Corps of Engineers,
Norfolk, Va.

DEAR COLONEL HUDSON: The Commonwealth of Virginia has completed its review of the Environmental Report for the Lake Gaston Water Supply Project for which you are considering a Section 404 permit application from the City of Virginia Beach. The Council on the Environment is responsibile for coordinating the State's review of federal and federally-mandated environmental documents and responding to appropriate federal officials on behalf of the Commonwealth. The following agencies have joined in the review of this document: Commission of Game and Inland Fisheries, Department of Agriculture and Consumer Services, Department of Conservation and Economic Development, Department of Health, Department of Highways and Transportation, Division of Industrial Development, Marine Resources Commission, State Air Pollution Control Board, State Water Control Board, Virginia Historic Landmarks Commission including Virginia Research Center for Archaeology, Virginia Soil and Water Conservation Commission, and Southeastern Virginia Planning District Commission.

The Commonwealth of Virginia has no objection to your issuance of a Section 404 permit for this project, provided that complementary and parallel regulatory processes yield compatible results and that the questions raised in the attachment are resolved to the satisfaction of affected parties. Assuming resolution of these concerns, we concur that this permit application should be approved on a Finding of No Significant Impact. Our rationale for supporting this conclusion, as well as the detailed comments of reviewing agencies, are also attached.

Thank you for the opportunity to review this document.

Sincerely,

SHEILA M. PRINDIVILLE.

ATTACHMENT

A. RATIONALE FOR PROJECT ENDORSEMENT

First, it does not appear that the withdrawal of water at the pipeline intake in Pea Hill Creek will affect local water quality adversely. The project makes minimal demands upon water supplies in the Roanoke River Basin; and, as page 79 indicates, it will not affect existing water intakes for the cities of Henderson, Clarksville and Roanoke Rapids. Nor will Kerr Reservoir water levels be notably affected.

Other project impacts also appears to be minimal or effectively mitigated. The 15 or 20 acres of forest to be cleared for the pipeline do not constitute a significant amount of forest acreage in relation to the total amount traversed by the pipeline route. Next, the three-foot-deep burial of the pipeline in areas of active pasture or cropland, together with planned provision of farm access in places where it might otherwise be impeded, indicate that agricultural land impacts of the projects will be acceptable. State parks and recreation opportunities will not be affected on a permanent basis; there will, of course, be some interference with recreational opportunities on the affected rivers and on Lake Gaston as river crossings and the water intake are put in place. The construction and operation of the project are not likely to adversely affect the ambient air quality. Finally, construction and operation will not necessitate changes in the Norfolk water supply system which is to receive the water.

B. COMMENTS ON THE ENVIRONMENTAL ASSESSMENT

The environmental report did not address all of the concerns raised in the scoping letters of the Commission of Game and Inland Fisheries (May 5) and of this office (May 31).

First, there is no discussion of monthly water retention in Kerr Reservoir. Specifically, how much of a reduction in this retention time is expected? Monthly reservoir drawdown increases must be related to monthly and yearly water retention times in the lake to allow effective evaluation of this project's impact on nutrient loading and productivity. If no change is expected in the phosphate budget (page 104), why is that the case?

Secondly, certain larval and sub-adult fish tend to travel on water currents. An increased withdrawal from Kerr Reservoir in the spring, when these larvae flow

into Kerr, could increase the larval departure rate from Kerr to Lake Gaston. This would inevitably reduce adult populations in Kerr. Will the Lake Gaston withdrawal cause an increased larval departure rate? To what extent will the flow from Kerr affect striped bass populations?

Thirdly, adult striped bass are seagoing fish in their native environments. They tend to drift downstream (seaward) after spawning. In Kerr Reservoir, these fish drift near the face of the dam. If increased late spring releases from Kerr (for the Gaston withdrawals) are sent through the turbines, striped bass, attracted by the flow, may enter the intakes in greater numbers and be killed. Can the Corps reduce this impact by making Kerr discharges for the Gaston pipeline during off-peak periods only? This would reduce the likelihood that the Lake Gaston water withdrawal will cause fish kills of the magnitude of the one in 1982, when a body of stream water carried striped bass through the lake and into the turbines. The timing of all discharges for the Gaston pipeline should also be discussed. Potential impacts and their mitigation should be identified.

The State Water Control Board offered the following comments on the City's environmental report.

While physical and chemical parameters are discussed, no information concerning the tropic status of the impoundment is provided. The existing trophic status and projections of the eutrophication rate are necessary to assess the long-term suitability of Lake Gaston as a water supply. The total phosphorus concentrations in Pea Hill Creek are greater than the EPA-recommended criteria of 25 ug/l to avoid nuisance algal blooms.

Also, the report indicated that Hampton Roads Sanitation District can expand its Atlantic plant to accommodate the additional wastewater this project will potentially produce. It also says that communities along the pipeline will be able to draw off water for their own use, but it does not say whether they have the capacity to treat additional volumes of wastewater which will result. This would seem to be an important consideration in terms of construction grants for sewage treatment and water quality of streams receiving treated effluents.

Finally, the City's Environmental Report did not address the problem of increased solids generation at Norfolk's Moores Bridge water filtration plant. In light of the current filter backwash solids disposal problems and the pending NPDES Board action, it is felt that the increase in filtered solids at the Moores Bridge's Water Treatment Plant should be evaluated.

C. COMMENTS ON PROJECT COORDINATION

As you are no doubt aware, there are several state regulatory actions that will be required for this project in addition to the Section 404 approval. The State Water Control Board's Section 401 Certification, which is required in conjunction with the Section 404 permit, is under review and will be determined before your permit decision. Marine Resources Commission permits for crossing of several rivers by the Lake Gaston water pipeline will be required; applications for these are under consideration. Marine Resources Commission permit review is, of course, separate from your permit process.

If the pipeline encroaches on any primary and secondary road rights-of-way, the City of Virginia Beach will be obliged to secure land use permits from the Department of Highways and Transportation.

The above coordination needs, as well as those which follow, are generally known to the City.

Coordination in regard to historic building and archaeological resource protection is being satisfactorily accomplished by the City and its consultants at this time. Mapping of the proposed pipeline route has indicated that several historic structures may be affected by the project. Similarly, a Phase I Archaeological survey is underway at this time to determine whether archaeological resources will be affected by the pipeline. We recommend that the Section 404 permit be conditioned to require that appropriate mitigation measures for these resources be required, if the survey findings and planning for historic structures indicate that such measures are necessary.

D. PROJECT CONSTRUCTION

Assuming that permits are issued for this project, several precautions should be taken during construction of the pipeline to minimize adverse environmental consequences. An Erosion and Sediment Control Plan will be required for the Virginia Soil and Water Conservation Commission. In this regard, it is particularly impor-

tant that General Criterion 77, page III-F of the 1980 Virginia Erosion and Sediment Control Handbook, be complied with the view of pipeline burial in some areas.

Fugitive dust should be kept to a minimum, and any open burning of debris from land clearing should be done in accordance with current regulations of the State Air Pollution Control Board. Use of any dust control agents other than water should be done with care, since such agents might in themselves threaten air quality or water quality.

In order to assist in developing geologic information for the Commonwealth, we encourage the City to conduct mineral resources surveys in areas where the right-of-way for the pipeline must be acquired. For the same reason, the State Geologist at the Division of Mineral Resources should be informed of opportunities to examine open ditches during construction. The Division would also appreciate receiving copies of any soil borning logs if soil borings are taken.

COMMONWEALTH OF VIRGINIA,
COMMISSION OF GAME AND INLAND FISHERIES,
Richmond, Va., August 15, 1983.

Mr. CHARLES H. ELLIS III,
Environmental Impact Coordinator Council on the Environment, Richmond, Va.

DEAR CHARLIE: We have reviewed the City of Virginia Beach's "Lake Gaston Water Supply Project Environmental Report" which you recently transmitted to us and object to it in its present form.

In a letter to you dated May 5, 1983 (copy attached), we suggested this proposed project had potential for fishery damage in several areas and suggested the City should cover such potentials in its environmental assessment. Our areas of concern were:

(1) Nutrient loading in both Kerr and Gaston Reservoirs;
(2) The tendency of certain larval and subadult fishes to travel on water currents;
(3) Striped bass adult migrations related to flows;
(4) Mainstem silt load increases in Pea Hill Creek;
(5) Relationships of pumping to lake surface elevations;
(6) Effects on construction on environment.

We believe the applicant basically ignored Items 1, 2, and 3 in the existent Environmental Assessment. The proposed yearly drawdown increases associated with Kerr Reservior are interesting but they are, by themseleves, incomplete and they may be misleading. At least monthly reservoir drawdown increases must be related to monthly and yearly water retention times in the lake to effectively evaluate this projects potential effects on nutrient loading and productivity.

Striped bass larvae, and adults returning to Kerr Lake, travel downstream on water currents, and sometimes emigrate from the reservoir in relatively large numbers (i.e., 1982 adult emigration). Since most such emigrations seem to be related to larger than normal Kerr Lake discharge and this project may increase the probability of such discharge, such possibilities must be addressed in the Environmental Assessment. Such evaluation should cover the April, May, June period and relate the Virginia Beach need to normal versus increased daily Corp discharges. Other parts of the report relating to entrainment, etc. are basically sound but crappie spp. should be added to such discussions.

Sincerely,

JOHN P. RANDOLPH, *Assistant Executive Director.*

COMMONWEALTH OF VIRGINIA,
STATE WATER CONTROL BOARD,
Richmond, Va., August 17, 1983.

Re: Environmental report on Lake Gaston water supply project.

Ms. SHEILA M. PRINDIVILLE,
Administrator, Council on the Environment,
Richmond, Va.

DEAR SHEILA: We have reviewed the above referenced Environmental Report and don't see any significant long-term environmental problems resulting from operation of this water withdrawal. There appears to be an adequate volume of water in Lake Gaston to allow withdrawal of 60 MGD without impact on the lake system. There should be no chance for introduction of harmful or competing species of aquatic life from one river basin to another as the water will be piped directly to

the Norfolk water supply and not into some lake or stream. The water is of good quality and should not pose extraordinary problems in the treatment process at Norfolk. This plan is definitely the best the alternatives considered from an environmental viewpoint.

Attached are several comments which are offered for your consideration in developing the Commonwealth's position.

Sincerely,

RICHARD N. BURTON, *Executive Director.*

ATTACHMENT—SWCB COMMENTS AND CONCERNS REGARDING JULY 1983 ENVIRONMENTAL REPORT ON LAKE GASTON WATER SUPPLY PROJECT

1. Physical and Chemical parameters are discussed, but no information concerning the tropic status of the impoundment is provided. The existing trophic status and projections of the eutrophication rate are necessary to assess the long-term suitability of Lake Gaston as a water supply. The total phosphorus concentrations in Pea Hill Creek are greater than the EPA recommended criteria of 25 ug/l to avoid nuisance algal blooms.

2. The report does not state whether Lake Gaston or the Pea Hill Creek arm stratify or not. On page 101, it is implied that Lake Gaston does not stratify; this is unlikely.

3. The construction methods detailed on Page 55 are very good. The measures to be employed at minor stream crossings are not detailed. We are concerned about the short-term impact on small streams where the pipeline will make submarine crossings. Experience with other pipelines has shown that large amounts of sediments can be released to cover bottom habitats and kill aquatic organisms when heavy equipment moves in and out of streams. We would like to know more details of how they plan to minimize the release of sediments at these crossings. A listing of the minor stream crossings and details of the construction methods to be employed in making these crossings should be included in the Report.

4. The wetlands which might be affected by the project should be quantified. Also, we would like to see more detailed descriptions of exactly where vegetation will be cleared for corridor widening. It seems to us that rather extensive amount of mature trees may be lost along the VEPCO powerline corridor and where the pipeline will parallel the Norfolk water line from Walters to Red Top.

5. Presumably containment of temporary storage areas will also be provided. This should be stated.

6. What surface stabalizing agents other than water will be used for dust control? Are these materials toxic to fish or wildlife?

7. The design of the intake structure with 1 mm openings and a 0.5 fps velocity should minimize entrainment or impingement impacts on fish and other aquatic life. The idea of constructing artifical spawning beds for Walleye is commendable mitigating measure.

8. Will the farm ponds which must be drained be restocked when they are refilled? Will there be any provisions for compensation to the pond owners for any loss of pond acreage on their fishery value?

9. The summary provided in Chapter IV is a very concise and cogent method to the state impacts and the mitigating measures.

10. The report indicated that HRSD can expand its Atlantic plant to accommodate the additional wastewater this project will potentially produce. It also says that communities along the pipeline will be able to draw off water for their own use, but it does not say whether they have the capacity to treat additional volumes of wastewater which will result. This would seem to be an important consideration in terms of construction grants for sewage treatment and water quality of streams receiving treated effluents.

11. The desalination option addresses seawater and a combination of three sources—fresh ground water, brackish ground water, and brackish water from Back Bay. There is the relief that the brackish aquifers could provide the entire 60 mgd. This should be further evaluated since it would preclude the withdrawal from Back Bay and the accompanying adverse impacts.

12. The City's Environmental Report did not address the problem of increased solids generation at Norfork's Moores Bridge water filtration plant. In light of the current filter backwash solids disposal problems and the pending NPDES Board action, it is felt that the increase in filtered solids at the Moores Bridge's WTP should be evaluated.

COMMONWEALTH OF VIRGINIA,
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT,
DIVISION OF PARKS AND RECREATION
Richmond, Va., August 4, 1983.

MEMORANDUM

To: Eugene K. Rader.
From: Ronald D. Sutton.
Subject: Lake Gaston Water Supply Project.

The Division has reviewed the Environmental Report of the above referenced project. The report addresses issues raised earlier by the Outdoor Recreation Services Section. If the proposed project is designed, constructed and operated as indicated in the Environmental Report, we feel that it will not impact those resources with which we were concerned. At this time there is no impact by the project on State Park resources in the region.

COMMONWEALTH OF VIRGINIA,
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT,
DIVISION OF MINERAL RESOURCES
Charlottesville, Va., August 8, 1983.

MEMORANDUM

To: Charles H. Ellis, III.
From: Eugene K. Rader.
Subject: Environmental Assessment for the Lake Gaston Water Supply Project.

The use of existing right-of-ways will make the impact of the pipeline on the potential mineral resource development negligible. In the area where right-of-way must be acquired, a mineral resource survey should be conducted.

COMMONWEALTH OF VIRGINIA,
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT,
DIVISION OF FORESTRY
Charlottesville, Va., July 28, 1983.

To: Gene Rader, EIS Coordinator, Division of Mineral Resources.
From: Harold L. Olinger, Assistant Chief, Forest Management.
Subject: Environmental Review—Lake Gaston Water Supply Project.

Please find below my comments and those of C. C. Morris, District, Forester in Waverly, Virginia, concerning the above subject requested by your office on or before August 5, 1983.

The amount of forestland which will be cleared for right-of-way will be only 15 to 20 acres due to the use of existing rights-of-way. This area is minimal in view of the scope of the project.

The use of water from Lake Gaston, instead of withdrawal from the Nottoway River and the Blackwater River, will have a positive effect on the Chowan River and is, therefore, considered beneficial to forestry.

COMMONWEALTH OF VIRGINIA,
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT,
DIVISION OF MINED LAND RECLAMATION
Big Stone Gap, Va., August 5, 1983.

MEMORANDUM

To: Eugene K. Rader.
From: Sam Easterling, Pollution Control Specialist.
Subject: Lake Gaston Water Supply Project.
Date: August 5, 1983.

Since I have not yet received a copy of the "Lake Gaston Water Supply Project Environmental Report", I am unable to make comments at this time.

August 8, 1983.

The following was called in on August 8, 1983. Copy of report located and reviewed. The report appears to be well prepared. Mined Land Reclamation has no comments.

(A) Please review the document carefully. If the proposal has been reviewed earlier (e.g., if the current document is a final EIS), please consider previous comments.

(B) Prepare your agency's comments in a form which would be acceptable for responding directly to a project sponsoring agency.

(C) Use the space below for your comments. If additional space is needed, please attach extra sheets.

Return your comment to: Charles H. Ellis III, Environmental Impact Statement Coordinator, Council on the Environment, 903 Ninth Street Office Building, Richmond, Virginia 23219.

CHARLES H. ELLIS III,
Environmental Impact Statement Coordinator.

COMMENTS

See comments attached.
August 9, 1982.

A review of the Environmental Report on the proposed Lake Gaston Water Supply Project for the City of Virginia Beach has been made.

The selected routing for the proposed water pipeline appears to be one with minimal impact on the environment and agricultural land uses. The plan states that the pipeline will be buried at a depth of at least 3 feet for all sections of the pipeline that pass through "active" pasture or cropland. The plan also states that "additionally, in project planning, phasing precautions will be taken and provisions made to avoid limiting access to farm fields or pasture land that are only accessible by crossing the proposed pipeline corridor, or that uses a portion of the pipeline corridor (e.g., the abandoned railroad corridor) for access." Furthermore, special precautions will be taken respective to the protection of livestock in the work areas and access routes during the period of construction.

Although not identified specifically as BMPs (Best Management Practices), the listing of measures to control soil erosion and sedimentation during the construction process is noted (Section C Water Quality, Item 4, page 32).

Assuming that the above considerations are adhered to, compatibility of the project with agricultural land uses appears satisfactory.

EARL A. FINCH,
Resource/Environmental Economist,
Dept. of Agriculture and Consumer Services.

(A) Please review the document carefully. If the proposal has been reviewed earlier (e.g., if the current document is a Final EIS), please consider previous comments.

(B) Prepare your agency's comments in a form which would be acceptable for responding directly to a project sponsoring agency.

(C) Use the space below for your comments. If additional space is needed, please attach extra sheets.

Return your comments to: Charles H. Ellis III, Environmental Impact Statement Coordinator, Council on the Environment, 903 Ninth Street Office Building, Richmond, Virginia 23219.

CHARLES H. ELLIS III,
Environmental Impact Statement Coordinator.

COMMENTS

The staff of the State Air Pollution Control Board has reviewed the EA Lake Gaston Water Supply Project as submitted by the city of Virginia Beach and anticipates no significant environmental effects to the ambient air quality as a result of its construction and operation.

Temporary effects due to construction (fugitive dust) must be kept to a minimum. Land clearing debris, if burned, must be disposed of in accordance with the current Air Pollution Control Board Regulations.

(A) Please review the document carefully. If the proposal has been reviewed earlier (e.g., if the current document is a Final EIS), please consider previous comments.

(B) Prepare your agency's comments in a form which would be acceptable for responding directly to a project sponsoring agency.

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(C) Use the space below for your comments. If additional space is needed, please attach extra sheets.

Return your comments to: Charles H. Ellis III, Environmental Impact Statement Coordinator, Council on the Environment, 903 Ninth Street Office Building, Richmond, Virginia 23219.

CHARLES H. ELLIS III,
Environmental Impact Statement Coordinator.

COMMENTS

The Department of Health supports the use of Lake Gaston as a water supply for the City of Virginia Beach. By letter report dated April 29, 1983, this Department provided the City with its recommendations on the alternative water supplies being investigated. As stated in this report, Lake Gaston is considered to be one of the most desirable alternatives.

A copy of the letter report can be found as Appendix I in the City's Environmental Report on the Lake Gaston Project.

COMMONWEALTH OF VIRGINIA,
DIVISION OF INDUSTRIAL DEVELOPMENT,
Richmond, Va., August 12, 1983.

Mr. CHARLES H. ELLIS III,
EIS Coordinator, Council on the Environment,
Richmond, Va.

DEAR CHARLIE: We have reviewed Lake Gaston Water Supply Project Environmental Report that was submitted to the Corps of Engineers by Virginia Beach. We agree with the discussion and analysis of the socio-economic impacts on the study area.

We feel the projected weather needs of Virginia Beach and Southeastern Virginia will be realized. The proposed project should meet this forecasted water need, as well as, help support both the expected economic development and continuing national defense activities within the area.

Any adverse impacts from pursuing the Lake Gaston alternative appear to be genuinely minor. Thank you for the opportunity to participate in the review process.

Sincerely,

JAMES C. MCKEAN, *Economist.*

SOUTHEASTERN VIRGINIA PLANNING DISTRICT COMMISSION,
Norfolk, Va., August 11, 1983.

Re Lake Gaston Water Supply Project (WAS: 82A), Project Number 556&

Mr. CHARLES H. ELLIS III,
Environmental Impact Statement Coordinator, Virginia Council on the Environment,
Richmond, Va.

DEAR MR. ELLIS: Pursuant to your request of July 20, 1983, the staff of the Southeastern Virginia Planning District Commission has reviewed the Lake Gaston Water Supply Project Environmental Report and associated permit application. The SVPDC staff finds the project to be generally consistent with local and regional plans and concurs with the Report's conclusion that no significant adverse environmental impacts will result from project implementation. We have held this opinion since 1975.

As you are aware, Southeastern Virginia continues to face a critical water supply situation. A number of studies have been conducted over the last decade in an attempt to develop a long-term solution to the region's water supply problem. In 1975, the Southeastern Water Authority of Virginia (now SPSA) concluded that Lake Gaston was the most viable long-term water supply for the region. Although permit applications were filed, this option was not pursued at that time due to the considerable local (source area) opposition, the cost of additional environmental studies, and lack of State support for the project. However, the viability of the source was reaffirmed in the 1978 preliminary conclusions of the Corps of Engineers Study of the Long Range Water Supply Needs of the South Shore of Hampton Roads, Virginia. Changing federal guidelines, continued local (source area) opposition and lack of State support resulted in the project not being pursued at that time, pending revisions to the COE study. That process is still underway.

The 1980-81 drought confirmed earlier projections of a critical water supply shortage by the late 1970s. It also provided the impetus for efforts by a number of agencies, including the State Water Control Board, the Southeastern Public Service Authority of Virginia and the City of Virginia Beach, to renew concerted efforts to develop a viable water supply plan for the region. The City of Virginia Beach's Lake Gaston Water Supply Project is the culmination of that effort. In this context, it is deserving of strong State support.

If you have any questions, please do not hesitate to call.

Sincerely,

ARTHUR L. COLLINS, *Executive Director/Secretary.*

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8. Review Instructions:

(A) Please review the document carefully. If the proposal has been reviewed earlier (e.g., if the current document is a FINAL EIS), please consider previous comments.

(B) Prepare your agency's comments in a form which would be acceptable for responding directly to a project sponsoring agency.

(C) Use the space below for your comments. In additional space is needed, please attach extra sheets.

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CHARLES H. ELLIS III,
Environmental Impact Statement Coordinator.

COMMENTS

Chapter III-C-4, Page 33: In addition to the erosion control methods specified, since some of the pipeline will be buried, we are particularly concerned about compliance with General criterion 77, page III-F of the Virginia Erosion and Sediment Control Handbook. We understand that the scale of the project necessitates longer open trenches that specified in the above referenced criterion, and this can be negotiated at the time of erosion control plan review.

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION,
Richmond, Va., August 9, 1983.

Re Lake Gaston Water Supply Project, Corps of Engineers, City of Virginia Beach.

Mr. CHARLES H. ELLIS III,
Environmental Impact Coordinator, Council on the Environment
Richmond, Va.,

DEAR MR. ELLIS: Thank you for the opportunity to review the above noted document. The proposed pipeline will cross Interstate 95 and numerous primary and secondary roadways. It will also parallel portions of one primary and two secondary road.

Because of this encroachment of state right of way, the Department will require the City of Virginia Beach to secure land use permits for the accommodation of the utility. We would also point out that an alternate route for the proposed pipeline along an existing natural gas pipeline would appear to be preferable from our viewpoint than to parallel Routes 460, 636, and 634, as mentioned earlier. The Department hopes that this will be considered in the final analysis.

We look forward to coordinating with the City of Virginia Beach's engineers on the location and design of the proposed facility.

If you need additional information, please let us know.

Sincerely,

R. L. HUNDLEY, *Environmental Engineer.*

STATEMENT OF SENATOR PAUL S. TRIBLE, JR., ON H. R. 4317

Mr. Chairman, I appreciate this opportunity to appear before your subcommittee to discuss the construction of a pipeline between Virginia Beach and Lake Gaston, Virginia.

As a result of the substantial population growth, Southeast Virginia began to experience recurring water shortages in the early 1970's. Most affected are the cities

of Virginia Beach, Chesapeake and Franklin, and Isle of Wight County. These municipalities currently draw their water from a mix of sources; some deep wells, some purchased water from nearby communities.

In 1975 the U.S. Army Corps of Engineers began studying various alternatives to ensure adequate water supplies. It was determined that a 60 million gallon per day supply would be needed over the next 50 years.

The Corps studied 36 different alternatives on the basis of cost, reliability, and least environmental impact. In 1978, as a result of extensive study, the Corps recommended the Lake Gaston pipeline.

In 1978 the City of Virginia Beach undertook its own water resources study. The City looked at many of the alternatives examined by the Corps, plus other unconventional approaches. Public hearings were held both in Virginia and North Carolina. Virginia Beach ultimately concurred in the Corps' selection of the Gaston pipeline, and last year applied to the Corps for a construction permit.

I outline this brief history to demonstrate that Virginia Beach did not simply select the most economical and accessible water source, as the opponents this construction permit charge.

The Lake Gaston pipeline project was selected by both the Corps of Engineers and the City of Virginia Beach after 15 years of intense study. The Corps and the City of Virginia Beach have thoroughly investigated the potential environmental consequences and have concluded there will be no impact on the Lake Gaston water quality or level, or on communities in the area.

It should be noted that, except for the Corps' costs associated with the studies, there has been and will be no federal money spent on the project. Virginia Beach will finance the $185 million pipeline through increased water rates and industrial revenue bonds.

I recognize that inevitably there will be concern over a project of the magnitude of the Lake Gaston pipeline. The Corps and City have both moved aggressively to answer these concerns. After a thorough examination of the record, I am satisfied that the Lake Gaston option was selected after adequate study and solely on its technical merits by both the Corps and the City.

I urge the committee today to allow the pipeline construction to go forward.

STATEMENT OF SENATOR JOHN W. WARNER ON H. R. 4317

Mr. Chairman, I appreciate the opportunity to join with Governor Robb, Senator Trible, Congressman Whitehurst, Mayor Jones, and other Virginia Beach city officials to testify on the proposed Lake Gaston pipeline project.

I am here this morning to voice my strong opposition to H.R. 4317 which would prohibit, in an ex post facto fashion, the Secretary of the Army from issuing the permit for the Lake Gaston pipeline until an Environmental Impact Statement has been completed.

Virginia Beach's application for a permit to build the Lake Gaston Pipeline is the result of years of study. As early as 1978 in an interim report on the Hampton Roads water supply, the Corps of Engineers examined 36 alternatives for providing additional water for the area and tentatively recommended the Lake Gaston Pipeline.

The Corps of Engineers has made, in my judgment, a most thorough examination of the project. The Corps has conducted three public hearings, circulated an environmental assessment for two public comment periods, and reviewed volumes of data on the project. On December 7, 1983, the Corps of Engineers released its finding that the project will not result in any significant environmental impact, precluding the need for an Environmental Impact Statement. On January 9, the Corps issued the construction permit. Of course, lawsuits have been filed and it is now impossible to determine when they might be resolved.

As if the lawsuits were not going to delay the project enough, an effort is now being made for Congress to intervene.

Mr. Chairman, the Corps of Engineers is the appropriate Federal office charged by the Congress with determining the precise environmental impact of projects, such as the Lake Gaston Pipeline. I understand that the Corps makes thousands of environmental studies on proposed projects each year.

Federal law vests in agencies technical decision-making authority. We have thousands of engineers, scientists, and other Federal executive branch civilian and military employees who are specifically hired to make these determinations.

I believe the Corps is qualified to decide whether the Environmental Impact Statement is required before a Section 404 permit is issued. The Congress is not.

How many Members of Congress are really convinced that Congress is equipped to make technical judgments which override the decisions of the Executive Branch-decisions based on research and studies funded with billions upon billions of taxpayer dollars?

Why are we spending all these billions of dollars to support the Executive Branch so that they can hire these experts, if we in Congress become another executive branch?

The Congress' role is to make laws and oversee their execution. The Executive Branch administers our laws. The Judicial Branch interprets our laws. All three branches play a role in the Lake Gaston Pipeline project. Congress passed the law dictating how Section 404 permits shall be issued. The Executive Branch determined that an Environmental Impact Statement was not necessary and that the permit should be issued. The courts are now involved with challenges to that Corps decision.

If we intervene here, I suggest the Congress will be potentially subject to intervene in each and every Corps project. I cannot believe the Congress wants to get in the business of duplicating Corps business in determining which projects require Environmental Impact Statements. The ramifications of setting such a terrible precedent are obvious.

With the many important national issues before this Subcommittee, I question why its Members want to start ruling on the technical environmental impact of thousands of projects throughout the United States. I predict that if this legislation is enacted, everyone displeased with Corps of Engineers decisions will be lined up outside our doors requesting special legislation to veto or sanction their projects.

Despite the good efforts of the Chairman of this Subcommittee, the Congress has been logjammed for eight years on authorizing Federally-funded water projects. If the Congress is unable to move forward on such legislation of vital national importance, I certainly do not believe we should take on this additional task.

I suggest, Mr. Chairman, that the Executive Branch do what it is staffed and authorized to do. If we in Congress do not agree with the law by which such decisions are made, then Congress should change the law—not attempt to change individual decisions which we vest in the Executive Branch just because someone in our constituency disagrees with the conclusions.

I want to point out to the Subcommittee the implications of delaying the Lake Gaston Pipeline. Virginia Beach City officials have estimated that for each and every month of delay, project costs escalate by about $900,000. This imposes a severe financial strain on the taxpayers of Virginia Beach, who will ultimately bear the cost of the pipeline

I vividly recall the 1980–81 drought and its devastating impact on Virginia Beach. The economic stability, and indeed the future of the Hampton Roads region, depends on obtaining a secure supply of water. A technical review has shown that the Lake Gaston Pipeline is the only feasible source of water for Virginia Beach and that it will not result in any significant environmental damage to other parts of Virginia or North Carolina.

I urge the Subcommittee to reject H.R. 4317 and permit the Corps of Engineers and the courts to make the decisions for which they are responsible.

Mr. ROE. Please proceed.

TESTIMONY OF A PANEL CONSISTING OF HON. G. WILLIAM WHITEHURST, A MEMBER OF CONGRESS FROM THE COMMONWEALTH OF VIRGINIA; HON. JOHN W. WARNER, U.S. SENATOR FROM THE COMMONWEALTH OF VIRGINIA; HON. PAUL S. TRIBLE, JR., U.S. SENATOR FROM THE COMMONWEALTH OF VIRGINIA; AND HON. CHARLES ROBB, GOVERNOR OF THE COMMONWEALTH OF VIRGINIA

Mr. WHITEHURST. I would like to make one or two points.

As reflected by the attendence of the members of the Senate and the House, two Governors' offices and various municipalities, this is not just another pipeline to those of us in Virginia Beach. And I might add, that I am a resident of that city, it is, if you will, a "lifeline." Without this water, the Commonwealth's largest and fastest growing city will literally die of dehydration.

That may sound quite dramatic, but the situation the city finds itself in is nothing short of perilous. Three years ago there was a searing heat wave that brought about a debilitating drought. Not only were there numerous hardships on the residents of southeastern Virginia, but the burden was shared by businesses and, especially, tourists on whose trade my district depends so heavily.

We are going to receive testimony today from not only the gentlemen at this table, but also from the Corps of Engineers and from Virginia Beach expert—Virginia Beach's experts, rather, on this subject, Mr. Aubrey Watts, and indeed I am deferring most of my time to him because he has a presentation I think you will find very, very persuasive.

I would like to at this point, yield my time to first Governor Robb, and then to Senator Trible and if Senator Warner gets here, I will yield to him, and then if we might, to go directly into the testimony of the Virginia Beach representatives, because I really think that what they have to say is very, very critical to an understanding of the problem from the point of view of our city.

At this point, if I may, Mr. Chairman, I would like to yield to our Governor.

Mr. ROE. No objection.

We are always pleased to hear from Governor Robb.

Governor ROBB. Thank you very much, Mr. Chairman, and members of the committee.

I am delighted to have still another opportunity to appear before you on a matter of concern to Virginia, and like Congressman Whitehurst and Senator Trible, and Senator Warner, when he gets here, I want to be very brief.

I do have a statement that I would—I believe you have in your possession at this time, and I would like very much to have it put in the record, but given the enormous amount of information that you and the other members of the committee already have, I will not trespass on your time or take time for the technical presentation that Virginia Beach is going to make on this particular subject.

Mr. ROE. Without objection, so ordered.

Governor ROBB. Suffice it to say that I am here because I think it is important.

Congressman Whitehurst has indicated the importance to the Tidewater area of Virginia Beach and the need for the particular project.

When Virginia Beach first approached me about the project, I asked many of the same questions that my good friends from North Carolina and others are raising, and asked that those concerns that had been suggested by various individuals be addressed in some detail. It was not until I was absolutely convinced that this method had met all of the legitimate concerns that had been raised by any of those who had taken a look at it, that I agreed that it was appropriate for the State to place its imprimatur on a matter that obviously involves some disagreement between the regions of the State.

I do not like to find myself in opposition to my good friend and colleague from just south of our border, Governor Hunt, nor do I like to find myself on the opposite side from our very distinguished member of Congress Dan Daniels, from the Fifth Congressional

District, but in this particular case after reviewing all of the information, it is very clear to me that all of the factual concerns have been met in a very straightforward way, and there were some understandable emotional concerns that are always a part of any disagreement over water rights, and potential for use of water, but I think, and again I will simply refer to my statement, and the information that Mr. Watts and Senator Trible, Senator Warner, and Congressman Whitehurst and others will present on a straightforward natural basis, the concern, the environmental concern, the economic concerns are off it, and I think that the Corps of Engineers has dealt with this problem in a very straightforward way, has accepted the responsibility of making a decision based on the factual information that was available to them, and I hope very much obviously it will be the pleasure of this committee to support the Corps of Engineers in a very thoughtful and exhaustive examination of what I understand and recognize as a very emotional issue.

But I will not take anymore of the committee's time at this point, so that Senator Trible, Senator Warner and the members who are going to give factual presentations from Virginia Beach can make their presentations.

Mr. ROE. Very fine, Governor.

Senator Trible, please.

Senator TRIBLE. Thank you, Mr. Chairman.

I appreciate the opportunity to return to the people's body and address this issue before the committee.

Mr. Chairman, at issue here is not the need of southeast Virginia for water supply adequate to the needs of tomorrow, but what is at stake here and what is at issue here is the adequacy of the review process that leads to the completion of this project.

I would like to submit my full statement for the record and, if I might, I would like to briefly address that central issue.

Mr. ROE. Without objection, so ordered.

Senator TRIBLE. Mr. Chairman, in 1975, the Army Corps of Engineers began studying various alternatives to insure adequate water supply for southeastern Virginia. The corps studied 36 different options on the basis of cost, reliability, and least environmental impact. In 1978, as a result of extensive examination, the corps recommended the Lake Gaston pipeline.

In 1978, the city of Virginia Beach undertook its own water resources study. The city looked at many of the alternatives examined by the corps, plus many others. Public hearings were held. Virginia Beach ultimately concurred in the corps' selection of the Gaston pipeline and last year applied to the Corps of Engineers for a construction permit.

There followed more study, review, public hearings, and finally determination by the Corps of Engineers that the process should begin.

In short, the Lake Gaston pipeline project was selected by both the Corps of Engineers and the city of Virginia Beach after 15 years of intense study.

The corps and city have thoroughly investigated potential environmental consequences and have concluded that there will be no

impact on the Lake Gaston water quality or level or on communities in the area.

So after a thorough examination of the record, I am satisfied that the Lake Gaston option was selected after full study and fully on its technical merits, and I would urge this committee to allow the pipeline construction to go ahead.

Thank you, Mr. Chairman.

Mr. ROE. Senator Warner.

Senator WARNER. Mr. Chairman, throughout this rather controversial issue, I have taken the position to try and preserve the integrity of the decisionmaking process established by the Congress of the United States.

In my judgment, it is not only erroneous, but it is going to be impossible to convince the Members of the Congress that they are better equipped and qualified to make technical judgments which override decisions of the executive branch, and those decisions are based on research and studies funded with billions of dollars of taxpayers' funds.

I must tell you that if somehow H.R. 4317 should pass the House of Representatives, I predict it will not pass the U.S. Senate.

If I just may make a personal observation. In the Senate today there are but three of us that have a technical engineering background: Senator Glenn, Senator Evans, and myself. If we begin to go into the details of these environmental impact statements, the line is going to form to the right of all the disgruntled and unhappy people in these proceedings, to try and come up to the Congress and have them reverse the decisions of the executive branch.

If we think the law is defective, then we should change it. But as far as putting ourselves into the position of being a court of appeals on these types of decisionmaking, of the Corps of Engineers, I think it is wrong.

I would like to submit my statement in its entirety, to submit to any questions that members of the committee might wish to ask.

Mr. ROE. I want to thank you, Senator.

Your statement will appear, of course, in full in the record.

Now, as I understand it, Bill, there is going to be a little presentation made now?

Was that your intent?

Mr. WHITEHURST. That was our intention.

Mr. Chairman, it is not often that you could restrict us to less than 15 minutes, two Senators, a Congressman, and a Governor.

Mr. EDGAR. Mr. Chairman, I just was going to ask a question.

Mr. ROE. I am not going to shut off questions.

I just want to see what the schedule is.

Mr. WHITEHURST. I think we would all be prepared to answer questions, of course, before Mr. Watts appears.

Mr. ROE. What I want to know is, you have not completed your presentation at the moment.

Did not you say that you were going to present some additional technical data, or are you waiting?

Is that going to come later?

Mr. WHITEHURST. We would like to bring Mr. Watts up and Mr. Muehlenbeck, the city manager, and Mr. Jones, the mayor of Virginia Beach.

I think it is critical that they be heard.

But we would like to do our questions first, if we may.

Mr. ROE. All right.

Mr. EDGAR. Mr. Chairman, I wonder if, in order, and I do not want to be the first to ask the questions, whether or not we could ask some policy questions apart from the technical questions which these gentlemen may want to respond to on the record.

My fear is that their schedules may be such that they will be called away, and there are some questions I would like to direct to the panel.

Mr. ROE. OK.

Are there any questions of this group of witnesses?

The gentleman from Pennsylvania.

Mr. EDGAR. Thank you, Mr. Chairman.

I was intrigued with the discussion both from your perspective and from Mr. Valentine's perspective, and I have done some reading and some research on the issue. I have some specific questions and also a policy discussion that I think we ought to hold.

I chaired for 4 years a group called the Northeast Midwest Congressional Coalition which was a group that was organized in 18 northern tier States that have older infrastructures, older water supply and was concerned about the investment of dollars, both by States and by the Army Corps of Engineers in the South and West, and the Bureau of Reclamation and the Far West, and we held a series of regional hearings and a Washington conference, at which point we discovered some things that are important. I think the issue that you bring before us today is part of that policy discussion, and that is, there are fast-growing areas in the South and West with large inmigrations of populations, that do not adequately have water supplies for that inmigration of population. The State of Florida is another example of a State that is going to have enormous costs to hooking up new water supplies.

What I think is the concern of some of us on this committee is that you're asking us to allow the Army Corps of Engineers, to make a permitting decision on something that may, in fact, be the beginning of a national crisis. That is the need to cross interstate lines with water pipelines to provide for those areas of the country that are inadequately protected for long term water supply.

I wonder if you might answer just a specific philosophical question.

Do you really think that given the dimensions of this problem broadly in terms of a national problem, that we ought to be solving this on simply an assessment done by the Army Corps of Engineers?

I think Senator Warner misspoke when he talked about the fact that an environmental impact statement has already been completed, and as I understand it, it is only an assessment that has been done.

Mr. WHITEHURST. If I would take a first crack at this.

I would ask who is better qualified?

The corps has been in existence for a long time.

Mr. EDGAR. I'm not saying that the corps is not qualified in terms of technical arguments. What I am saying is that there is a policy question. I understand from previous testimony that your

community has sufficient quantities of water, it just happens to be polluted and there are some hazardous waste issues there, there is some issues relating to that water supply, which is a larger issue, and I wonder whether or not the Federal Government ought to really lay down a water policy, a clear definition of policy on water rights and shared water.

South Dakota wanted to sell a great deal of its water to Wyoming for redistribution south to southern States in a coal slurry pipeline process.

My objection to that coal slurry process was not that it is not new technology, but that we did not adequately protect other States that may be in that watershed.

I guess I am afraid that the policy decision that the court is making in your case may have enormous ramifications in other parts of the country if, in fact, it is utilized, it may be very valuable in your area but let us say in other areas that are not protected by interstate water compacts, there are agricultural interests that would be devastated and other communities could, in fact, be disadvantaged by this, what looks to you as an in-house technical decision by the Army?

Mr. WHITEHURST. I would like for our Governor to respond, if he might.

Governor ROBB. Let me just take one stab at the philosophical questions that you raised. Obviously, the Congress of the United States is looking at the water policy and the questions you raise on a national basis. In the Commonwealth of Virginia, we have the same kinds of concerns and frankly I am hopeful that within our own legislature we will be able to address the basic questions of interbase transfer of water but I do not think that it is sufficient reason that there may be a broader question not to address the individual question that is posed in this particular instance.

And, it is one of the reasons that although I am hopeful that even within the Commonwealth of Virginia, and we have water rich and water poor areas, as well, that we will continue to work toward a policy, we cannot let this specific solution which continues to build in terms of time, cost, energy lost, and the critical nature of their problem, which the technical people will present I think in much clearer detail than any of us. Simply in deference to their presentation, we would want to go into it right now.

But, yes, there is a very fundamental question that has to be addressed in terms of water policy, but I do not think that we ought to not address the questions that are ripe for consideration while an overall policy is considered.

I do not think that you're permanently altering your opportunity to address the broader questions and I would certainly encourage you to do that, but not to postpone decisions where it can have a very difficult adverse impact on the individual jurisdictions that are involved here.

And, again, it does not present the kind of downside risks on any objective basis that any of us have been able to discover to date.

Mr. EDGAR. Why is there not an interstate water compact between your State and the State of North Carolina?

Governor ROBB. I am sorry that some of the folks that were here earlier are not around to help us with that question. We are trying

to find ways to cooperate and we will continue to work on that and we thought at one point, frankly, that we were moving in that direction, and I understand that there are considerations that are prevalent this year that hopefully may not permanently impede the process.

Senator TRIBLE. Let me just add, if I might, Congressman Edgar, in response to your question.

The water problems of Southeastern Virginia can not—the resolution, rather, of the water problems of Southeast cannot await the shaping of a broad national water policy by this Congress.

Mr. EDGAR. Why not?

Senator TRIBLE. Because you and I both know from our experience, Congressman Edgar, that this Congress works very deliberately and very slowly and our constituents would often argue very painfully and these water requirements are immediate.

Mr. EDGAR. But if the gentleman will yield.

Senator TRIBLE. Let me respond, if I might, and then I will be happy to entertain your questions.

So, first of all, I would argue that although the point is well taken, that this Congress must shape a rational water policy for this Nation, that that does not argue against cases such as this, where the need is real and where the technical experts have said that process should move ahead on a timely basis.

Second, let me say that the pipeline does not cross from one State to another. Although the pipeline when drawn by a body of water shared by two States, it does indeed have a inter-State impact. But the construction of this pipeline would lie solely in Virginia and the cost of that project would be borne by the citizens of Virginia, not by the United States.

Mr. EDGAR. If the gentleman would yield.

How would the gentleman feel if the State of North Carolina were to plug into that same body of water and deplete its resources to communities in North Carolina that may have a similar growth problem and adequacy problem without having any input from the State of Virginia.

Senator TRIBLE. Well, a good politician an enabled Statesman would always refuse to respond to a hypothetical question, but I will be bold and respond and say that if such a situation did arise and if it was fully reviewed for 15 years and if all the technical experts decided in that case as they have here, that there would be no adverse environmental impact, then the only objection that could be raised would be a political one, and that is precisely what we have here today.

Now let me state you that third point and then I will yield to my distinguished colleagues.

Senator Warner and I took no sides in this question until the matter was fully and thoroughly reviewed by the Corps of Engineers, much to the chagrin of many of our constituents. We were taken to task because we did not jump in on day one. But it was our view that this was a technical decision that ought to rest in the hands of a very capable Corps of Engineers and that that review process ought to be permitted to unfold and then based on that completed and thorough process, when all the evidence was in, when all the evidence was clearly reviewed, it was determined by

those experts that from a technical standpoint this project ought to move ahead.

It was then based on that professional judgment that we have said that this project ought to move ahead and the political objections ought not to interfere.

Now, we live in a real world, and when a project of this nature is undertaken, inevitably concerns will arise. The point I am trying to make here this morning and I would suggest that to all those members of this panel that do not have a parochial interest at stake, they will also agree that the Corps of Engineers and the city of Virginia Beach have gone as far as they can to resolve satisfactorily the concerns that have been raised.

Fifteen years is a long time. Fifteen years is a long time, and there comes a time when study and review and public hearings must come to an end, and we have to move ahead and tackle problems that are real, that impact the quality of people's lives.

Mr. EDGAR. Let me just say two things to the gentleman and then ask one final question.

First of all, I congratulate both you and Senator Warner on looking first at the technical and making sure that it is technically feasible to do, and that is important. It is technically feasible to take the water from the Great Lakes and recharge the Ogallala aquifer that is under seven southwestern States, and is being drained at such a rate that it may in fact go dry, and it is technically feasible to do that, to transfer that water at great expense, great cost, but I think there is also a policy question that has to be asked, not just whether it is technically feasible to do it, but whether it is prudent and whether it meets at least regional policy for you and the States involved, as well as for the interests of that community.

But let me make one other point that I think has to be made. I have a highway in my district that was invented in 1952. Construction was started in the 1960's, and in 1969 it was shot down because the environmental impact statement had not been done because the law had been put in place to look at the environmental impact.

The highway is still not back under construction. We have studied it and studied it and studied it, and studied it much like you have with this project. But the fact of life is that the law demands that an environmental impact statement be done in relationship to that highway project.

I wonder why in the 15 years of struggle, why the most aggressive effort was not done by the Army Corps of Engineers in doing a full environmental impact statement, so that when you presented yourselves before the Congress today, rather than just an assessment, you have done all of that homework.

I guess the other side of the question, and I will close with this, is that the attorney general of North Carolina just indicated that it would, in fact, be in litigation for sometime, that no action is going to be taken, he lamented the fact that it was going to be in litigation; what would be the problem of going ahead and doing the environmental impact statement in an expeditious and expedited manner during the course of that litigation period?

Senator WARNER. If this committee establishes that precedent, then where is the line going to form for everybody else to come up here and petition you to do the same thing?

As Senator Trible pointed out, we, taken the political heat, particularly in my instance, we have tried to preserve the integrity of the process and the separability of the executive branch and the legislative branch. As far as that can be determined, no one has asserted that the Corps of Engineers has not operated within the law. Now, if we want to change the law, that is our responsibility. If we are going to put a congressional roadblock up against the issuance of these permits because we think at some point in time we want a policy review, and I hasten to bring to your attention that according to my understanding, despite the good efforts, of the chairman of this committee, the Congress has been logjammed for 8 years on authorizing Federally funded——

Mr. ROE. If the gentleman would yield.

I have only been chairman for a year, and I intend to get a bill passed this year.

Senator WARNER. Then let it be known that the Senate is equally at fault, Mr. Chairman.

But 8 years we have not been able to pass a federally funded water project.

Mr. EDGAR. Would the gentleman yield?

I have been one of the obstacles for those 8 years, and have spent time trying to throw a monkeywrench in, and I now support the chairman's effort in an omnibus water bill, but the reason I support it is because it is based on four or five major policy initiatives and I am very frustrated with this administration backing off from western water interests. I am frustrated at the fact that for 3 years they were interested in cost-sharing, and now suddenly with a letter to Senator Laxalt, they are not interested in that cost-sharing and want to do it on a case-by-case basis and in terms of policy, if the policy were set then an environmental impact statement was the process you go through on these major water deferrals that the other groups that are waiting in line to come forward would know clearly what to do.

Under the present circumstances, my guess is that the uncertainty is that the process is unclear. Our chairman, Chairman Roe, has done admirable work in trying to bring forward an omnibus water bill that looks at the process so that we can have clear ideas as to what steps have to be covered, shorten the time frame of years that these water decisions are made, but make the decisions based upon merit, based on cost-sharing, based on environmental mitigation, and based on equity between the States and those principles are real important, not only to myself, but others within the environmental community, and in some of the other groups and concerns that have held up the water process.

So I think that your point is well taken, action needs to be set in a policy direction, I think Congressman Roe's bill begins to do that. No reason why this cannot be considered at the same time.

Mr. ROE. The gentleman from Minnesota.

Mr. STANGELAND. I have no questions, but want to thank the distinguished panel and Governor Robb, welcoming him back to the witness stand.

I do have questions but I think they would be more appropriately answered by the gentlemen from Virginia Beach who are more in tune with the technical aspects.

Mr. ROE. The gentleman from California.

Mr. PACKARD. Thank you, Mr. Roe.

I, too, am amused, I should not use the word amused, at the intensity of this dispute.

It is not unlike what we have to deal with in California, except that ours has gone longer and is perhaps more overriding between the State of Arizona and the State of California. And I do not look forward, at least I do not encourage you to look forward to what is ahead of you, if you are just beginning this process of litigating between the two States.

We are not even at the end and we have gone for 30 or more years.

In the initial construction of the dam that created Gaston Lake, did Virginia participate in that?

Mr. WHITEHURST. Congressman Daniel is next to you. He lives up in that part of the State.

Maybe he knows.

Mr. DANIEL. I am sitting up here enjoying the interrogation. [Laughter].

Senator WARNER. We want very much for you to come down here and join us.

Mr. ROE. If the gentleman from California would yield.

Mr. PACKARD. Is it a total Federal——

Mr. ROE. If the gentleman will yield.

It is our understanding that it was. There was a number of these types of questions to get to the basic rudimentary facts of the issue promulgated at the beginning of the hearing, and the corps was unable to give us those facts, we had asked them to give us those facts in writing, because I think your point is right on target.

Mr. PACKARD. The point is, of course, that water rights are of such an overriding concern—I dealt with them as a farmer when I was young—water rights were perhaps the lifeblood of people that had them. Obviously, participation becomes a question of water rights. Pipelines, this length are not uncommon, at least in my State. We pipe water from northern California, much farther than this, but there is some inherent water rights which were purchased by Los Angeles and southern parts of the State that had a profound influence upon the rights to that water, and they merely had to provide the vehicle to get it there.

I did not see that in this dispute and, of course, again I see where court action is down the road for somebody.

I suppose the rest of the concerns that I have would be technical in nature.

Again, the water and where it is distributed is the real question that's going to have to be litigated or worked out through some negotiations. Negotiations are very difficult to accomplish that in our experience.

I will not go further.

Mr. ROE. The gentleman from North Carolina.

Mr. VALENTINE. Mr. Chairman, thank you.

Just one or two brief questions.

I respect all of you gentlemen very much, and you all have a lot more experience, although I am older than some of you in government.

But I would just like to ask Senator Trible, if you accept the fact that an environmental impact statement is designed as to advise one as to the environmental impact of a certain project, how do you decide that there is no impact on the environment without having the benefit of an environmental impact statement?

Senator TRIBLE. Well, I will say to the gentleman from North Carolina that it is the judgment of the experts here in residence, the Corps of Engineers, that this matter has been fully investigated and examined and studied and that the environment consequences are fully known, and that they are not substantial, and should not impede the implementation of this proposal.

Now, I have seen no evidence, substantial evidence, to the contrary. The Corps of Engineers has had hearings, has had years of study and examination of all the consequences and it is their professional opinion that this is not only technically feasible, but that it will not have an adverse effect on the communities and the countryside, it will not have an adverse effect on the environment.

Now, I yield to their professional judgment. I am not really in a position to make that judgment. Perhaps the gentleman from North Carolina is in a better position to make that judgment.

But the experts in the field, after full study, have said this project ought to go ahead. We are not arguing that this environmental review process should be short-cut, indeed, 15 years would suggest to me and to others, that the environmental consequences have been fully reviewed.

Mr. VALENTINE. What you are saying, Senator, is that you do not think that an environmental impact statement is necessary because the corps told you it was not necessary?

Senator WARNER. If I might interject, the corps did a technical review and provided and environmental assessment and it was at that juncture that they decided that the full statement was not required. And they acted within the law.

Mr. VALENTINE. That is the seven-page document that the attorney general showed here awhile ago, they had one sentence about the impact on fish in the river.

Well, I do not want to debate it because you all could outtalk me, but I just want to ask you if you will do one thing for me.

Senator TRIBLE. Watch out.

Mr. VALENTINE. And I say this with complete respect, I would ask this of the Governor and the two Senators, would you share with me what the corps showed you or told you to convince you that no environmental impact was necessary, because we cannot get them to tell us anything except it is not necessary. I respect the Governor of Virginia. I would ask him to give us the benefit of what they showed him that convinced him or even this, to call the Corps of Engineers and say, you tell him what you told me, or show him what you showed me, because we do not have that.

Governor ROBB. Mr. Valentine, I am sorry I was not here this morning for the presentation by the corps, but the corps very kindly, as a matter of fact, at the request of your Governor, and your senior Senator, made a personal presentation to me and I

raised some of the same questions that we have talked about and discussed at some length, and satisfied myself that there was no legitimate concern that had not already been addressed as Senator Trible, Senator Warner have indicated.

The corps, in their environmental assessment, have indicated that they simply do not think it is necessary to waste taxpayers' money to find answers to questions that they have already resolved, and it is really that simple.

I am in full agreement with the purpose of the environmental impact statement and I do not want anything that I have said or anything that—and I am sure that the other gentlemen here this morning, to suggest that there is any contrary position here, but there is no sense in simply spending money, wasting time, and increasing the cost for this project that is going to have to be borne by the citizens of southeastern Virginia, ultimately, if there is no need for it. I do not want to launch into one of my State versus Federal spending priorities dissertations on a soapbox at this point, so I will quit.

But it is simply not necessary and I think that there are statements of record, although I know that they're probably not embraced in the same way at this point by very distinguished officials from North Carolina that indicates that litigation would not be successful, that it would simply extend the cost, time, energy, but not do anything to bring about a different result, and I think the corps has very forthrightly made that assessment. We are simply trying to save taxpayers' money and save money for all of the participants.

I recognize that is a rather futile hope, but it is on that basis.

Senator WARNER. If the Governor would yield.

Mr. VALENTINE. The attorney general says he is going to win.

Senator WARNER. If I might just complete the question and answer. Here is the report that was submitted by Virginia Beach entitled the "Environmental Report."

We do not have the one, unfortunately, here in the hearing room. Here is the one that was submitted by the Corps of Engineers.

Mr. VALENTINE. How many pages is that? Hold them up so we can see it.

Senator WARNER. Well, let us see. It is like dealing a deck here.

Mr. VALENTINE. What we want is the big one done by somebody who is not interested, somebody who represents both the people in North Carolina as well as Virginia Beach.

Senator WARNER. Those are the two documents that justify this decision.

Mr. VALENTINE. Thank you, Mr. Chairman.

Mr. ROE. The gentleman from Minnesota?

Mr. STANGELAND. I guess I would like to address, and perhaps this panel was not here this morning, the question as to whether or not other agencies, particularly Fish and Wildlife, had been apprised of the initial assessment. We were sure they were.

I am not a technical person. I do not know if the corps knows how to protect a fishery, and whether that river is a fishery, or whether that river flushes Albemarle Bay. That could be a concern, but I know darn good and well if Fish and Wildlife had one

iota of concern there would have been an EIS from that standpoint. I think that is significant, and I think we ought to keep that in perspective.

Mr. WHITEHURST. Would the gentleman yield?

I think that the point is well taken, because I can think of other corps' projects that involve Fish and Wildlife in my district, and you are right, they have jumped on it immediately.

Mr. EDGAR. Would the gentleman yield at that point?

Does the Fish and Wildlife Service have the authority on its own to ask for an environmental impact statement to be made on this project, given the fact that this assessment was only referenced to them, and it was not a primary Fish and Wildlife project?

Mr. STANGELAND. The testimony of the corps will show that the three agencies were a part of the process all the way through.

Mr. EDGAR. That is correct, but I do not want the record to include the assertion that if Fish and Wildlife did not like what they saw, then they on their own, by law, could in fact call for an environmental impact statement. I do not believe that the law gives them that right unless they are the primary agency involved in the issue.

Mr. STANGELAND. The testimony stated no objection.

Mr. EDGAR. But they did not—they do not have the authority to call for an environmental impact statement. That is the question that I am raising.

Mr. STANGELAND. I think the point to be made is that had they been concerned about the fishery and the flushing of Albemarle Bay they would have offered an objection and called for an EIS.

Mr. EDGAR. But they do not have the power to order an environmental impact statement.

Mr. ROE. I think the point might be academic.

The Chair wants to thank the distinguished panel for their vigorous presentation this morning, and understandably so.

Let me offer a suggestion, however, that I think one ought to be considering a bit. I think that in this particular case it bears out very, very clearly the need of revising and getting on with getting the job done in this country.

You know, we have put together a very, very comprehensive and very complex legislative policy position that we are moving right now.

We have been through full committee and subcommittee, and we are getting ready to go to the floor, and it will be coming across, with all due respect, to your most distinguished body. We are trying to get across to the people in this country that we cannot fritter any longer, that we have to get something done, or there is not going to be any water supply for this Nation. That is the issue.

And the controversy that has emerged, which has fallen into this august body, mainly this committee, comes back and says that it is not the issue of the environmental impact statement, in my judgment, that is involved here.

But it seems to me to be abundantly clear that we have got to come to a broader decision than whether or not we are going to approve or disapprove an environmental impact statement. Regardless of the arguments on both sides of that issue, we are going to resolve this matter.

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Otherwise, this matter could go on for another 15 years, and it may very readily be that it is going to take an act of Congress to decide the issue.

But what is important here is the water supply situation, as far as North Carolina is concerned, and the water supply situation as far as Virginia is concerned. It is a common interest, far better to bring brothers together, to see if we can resolve the matter, rather than being a point of waiting year after year. I think it is fundamentally wrong and a travesty to the people of this country that it takes 18½ years on average to get any water supply program approved in this country. That is no testimony to our ability to solve these problems.

So we are highly sympathetic to both your respective States.

Mr. VALENTINE. Mr. Chairman, could I have your permission to read an excerpt from a letter from the Department of the Interior to Governor Hunt, within the past few days, it bears on this question that the gentleman raised? It will take me just about 2 minutes.

Mr. ROE. Go ahead.

Mr. VALENTINE. This is a letter to Hon. James B. Hunt, Jr., Governor of North Carolina, dated January 20, 1984 from Glen Kinser, Ph. D., Supervisor, Annapolis Field Office, U.S. Department of the Interior, Fish and Wildlife Service.

It says, the third paragraph on page 1, it is a two-page letter. He says:

> We are concerned, however, that our positions on minimum stream flows and cumulative impacts as addressed in our letter of September 6 and November 28, 1983, were not given the full consideration we believed to be necessary. Since the salient issues were not addressed in the field environmental assessment, therefore our letter, copy enclosed to the corps, regarding the final environmental assessment, reiterates our position that the issues of minimum stream flow needs—needs and cumulative impacts of all water users within the basin must be addressed.

I would like permission to make a copy of this, and I would like to ask the gentleman if this letter appears in any of your documents supporting what the Corps of Engineers is trying to get by with?

Senator TRIBLE. Congressman Valentine, if you will supply to us all of your documentation we will in turn supply to you all of our documentation.

Mr. VALENTINE. I can give you all of mine in a paper bag. I will get it to you, though.

Thank you.

Senator TRIBLE. All right. Good.

Mr. VALENTINE. I do not have much.

Mr. EDGAR. Mr. Chairman, I ask unanimous consent that this letter be included in the record at this point.

Mr. ROE. Without objection, so ordered.

[The letter referred to follows:]

U.S. DEPARTMENT OF THE INTERIOR,
FISH AND WILDLIFE SERVICE, DIVISION OF ECOLOGICAL SERVICES,
Annapolis, Md., January 20, 1984.

Hon. JAMES B. HUNT, Jr.,
Governor, State of North Carolina,
Raleigh, N.C.

DEAR GOVERNOR HUNT: Thank you for your letter of December 29, 1983, expressing your concerns about the use of Lake Gaston as a water supply source for the City of Virginia Beach.

The points that you raise concerning impacts to striped bass and water quality due to reduced flows from the proposed interbasin transfer, are fish and wildlife resource issues that we have continually addressed throughout our review of this project. The Fish and Wildlife Coordination Act mandates that we insure that potential impacts to fish and wildlife resources are given equal consideration during the decision-making process for Federally funded authorized, or permitted activities. We hope to insure that potential impacts (particularly to striped bass and wetlands with this project) are minimized and of an acceptable nature. In light of the other water supply alternatives which have been studied, we do believe the Lake Gaston alternative offers the least potential impact to fish and wildlife resources.

We are concerned, however, that our positions on minimum stream flows and cumulative impacts (as addressed in our letters of September 6 and November 28, 1983) were not given the full consideration we believe to be necessary, since these salient issues were not addressed in the final environmental assessment. Therefore, our letter (copy enclosed) to the Corps regarding the final environmental assessment reiterates our position that the issues of minimum streamflow needs and cumulative impacts of all water users within the basin must be addressed.

We believe, as our earlier recommendations state, that the best mechanism to resolve these issues is through a task force made up of representatives of the Corps of Engineers and the States of North Carolina and Virginia. We believe that some of the goals of any task force established should be to determine the future instream flow needs of fish and wildlife resources, and the immediate and cumulative impacts of one or several existing, planned or future interbasin transfers of water from the Roanoke River Basin. We, as well as our Raleigh, North Carolina Office, would be pleased to participate on a task force to work toward an equitable solution.

I trust that together we can cause these issues to be resolved.

Sincerely yours,

GLENN KINSER, Ph.D.,
Supervisor, Annapolis Field Office.

U.S. DEPARTMENT OF THE INTERIOR,
FISH AND WILDLIFE SERVICE, DIVISION OF ECOLOGICAL SERVICES,
Annapolis, Md., January 5, 1984.

Col. RONALD E. HUDSON,
District Engineer, Norfolk District, Corps of Engineers,
Norfolk, Va.
(Attention of Bob Hume.)

DEAR COLONEL HUDSON: The U.S. Fish and Wildlife Service has reviewed the final Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for the proposal by the City of Virginia Beach, Virginia, to withdraw up to 60 million gallons of water per day from the Pea Hill Creek arm of Lake Gaston in Brunswick County, Virginia. The application for this project includes the construction of approximately 84.5 miles of water transmission line which would include several river and stream crossings.

This letter constitutes the final report of the Service and Department of the Interior on the project, and is submitted in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; U.S.C. 661 et seq.).

The Fish and Wildlife Service finds that in general the final EA adequately assesses the existing fish and wildlife resources in the project area and the probable impacts of this proposed project on such resources. However, as we previously stated in our letters to you dated September 6, 1983, and November 28, 1983, the issue of minimum instream flow needs for the Roanoke River basin has not been adequately addressed. The Service continues to recommend that the potential cumulative impacts of the proposed withdrawal be evaluated in conjunction with existing and future municipal, industrial and agricultural withdrawals from the river basin. It is the Corps' responsibility to assess cumulative impacts of this proposal in accordance

with provisions of your Interim Final Rules for Regulatory Programs as stated in 33 CFR Part 320.4(a)(1), dated July 22, 1982. The Service reiterates its earlier recommendation that the Corps and the States of North Carolina and Virginia undertake an assessment of the instream flow needs of the Roanoke River basin, and evaluate the cumulative impacts of existing and future water withdrawals. We would be pleased to participate on a task force to work toward ths end.

If you should have any questions regarding our comments, please contact Albert Spells of our Gloucester Point Office (804-642-4800 or 5130).

Sincerely,

GLENN KINSER, *Supervisor, Annapolis Field Office.*

Mr. ROE. I think we have concluded our testimony at the moment. I want to thank you very much for your valid time—pardon?

Mr. WHITEHURST. Mr. Chairman, I would like to introduce the witnesses.

Mr. ROE. We are going to do those next, yes.

So we want to thank you very much for being with us, and we will continue our deliberations.

Now, our next panel will consist of Hon. Louis Jones, mayor of Virginia Beach; Mr. Thomas Muehlenbeck, Virginia Beach city manager; and Mr. Aubrey Watts, city utilities director, and the Chair would recognize—I want to welcome you all first to the committee.

The Chair would recognize again the Hon. William Whitehurst from Virginia to present the representatives from the city involved.

Mr. WHITEHURST. Thank you very much.

I would beg the indulgence of the chairman, my colleagues.

The Intelligence Committee is marking up amendments to the Freedom of Information Act today. I am the ranking minority member on that committee, and I am going to have to leave to go back.

I have heard this briefing, however, it is comprehensive, I think it is persuasive, and I would like first to introduce Mayor Jones, then City Manager Muehlenbeck, and finally Mr. Watts, who will give the briefing with the slides that he has brought with him.

Mr. EDGAR [presiding]. Without objection, the full text of Mr. Jones' statement, and the full text of this document will be made a part of the record.

[Statement referred to follows:]

PREPARED STATEMENT OF HON. LOUIS R. JONES

Mr. Chairman, my name is Louis R. Jones, and I am the Mayor of Virginia Beach, the largest city in the Commonwealth of Virginia. I am speaking to you today as a representative of the City Council and the City of Virginia Beach.

Virginia Beach and southeast Virginia do not have a future water problem, they have a present-day water problem which will be larger in the future. The 1980/81 drought was a graphic demonstration that area water supplies cannot meet existing, much less future water demands.

Since 1978, my city has spent several million dollars searching for a solution to the water supply problem. We have devoted additional time and money to such exotic and unconventional alternatives as shallow groundwater, desalting, and wastewater reuse. We did this in a sincere effort to solve the problem within our own borders. Unfortunately, none of these alternatives or combination of alternatives met all the necessary minimum criteria for quantity, quality, cost, reliability, or environmental acceptability.

Gentlemen, if you have any doubt that southeastern Virginia needs this water or that Lake Gaston is the best overall solution to the water shortage, please review the positions of the Virginia State Water Control Board, Virginia Department of Health, the Southeastern Public Service Authority, Virginia Council on the Envi-

ronment, Marine Resources Commission, and the many other responsible organizations, with excellent staffs who have recommended our approach to this serious water resource problem.

We hear a lot today about the transfer of responsibilities from the federal to the local level. Well, Virginia Beach and its partners in the project are local governments willing to pay upwards of $200 million to solve their own problems. We have clearly gone the extra mile to structure this project in such a manner as to minimize the impact on the human and ecological environment. We have moved the intake and pipeline route at a cost to the project of over $410 million. We have contracted with and paid the Corps $2.275 million for storage in Kerr Reservoir in order to protect downstream flows in the Roanoke River. In short, we have done everything we possibly can do to reduce or eliminate the already minor impacts from this proposed project.

I request that this Committee not allow the opposition to make a political issue of the National Environmental Policy Act. Virginia Beach would not oppose the preparation of an Environmental Impact Statement if there was one shred of believable evidence that could demonstrate significant environmental impacts from this project. But there is no evidence and there are no significant impacts. The opposition has never been able to produce one qualified professional study that would identify and quantify the environmental and social horrors they claim will arise from this project.

The truth is that the maximum withdrawal of 60 million gallons per day is so small compared to the natural inflow, hydroelectric releases, and other minimum releases that govern the system, neither the Corps of Engineers nor Vepco could ever detect the loss without meters installed at the withdrawal point.

Members of the Subcommittee, I know Virginia Beach can count on you and your staff not to interfere with this permit process and will allow us to continue in accordance with the laws and regulations governing such matters. I also know that the opposition has been unable to formulate a valid technical argument to stop the project and has instead relied upon political pressure. Inflation increases the cost of this project by about $1 million per month. An environmental statement would be a terribly expensive way to restate what the City's Environmental Report and the Norfolk District's Environmental Assessment have already clearly shown. That is, there is no significant impact from the proposed Lake Gaston project.

Thank you.

TESTIMONY OF THOMAS H. MUEHLENBECK, CITY MANAGER, CITY OF VIRGINIA BEACH

Gentlemen, my name is Thomas H. Muehlenbeck, and I am the City Manager of Virginia Beach.

Today you will hear testimony for and against the proposed withdrawal of 60 million gallons of water per day from Lake Gaston. Whether you support this project or not, you will undoubtedly hear things that you either do not agree with, do not believe, or do not want to believe. Regardless of your evaluation, this project should be allowed to proceed in an orderly manner and in accordance with established policies, without the interference of special legislation which singles out Virginia Beach and southeast Virginia.

When Virginia Beach selected Lake Gaston as the best overall solution to its water supply problem it was aware of the opposition from the many residents and communities located around the lakes and rivers. We have always expected and fully supported the opposition's due process rights of objection to this project. I think you will have to admit that the City really did go the extra mile when it supplied over five hundred free copies of its three hundred page Environmental Report in order to better inform the public. In spite of this effort, truly imaginative exaggerations and misinterpretations have continued to dominate and confuse the issues. Today, I would like to try to set the record straight about a few of these misconceptions:

1. Virginia Beach and southeastern Virginia really do need the water. If you have any doubt, please talk to some of the residents who lived through the 1980/81 drought. They will tell you about catching shower water in a bucket for reuse; only flushing the commode at the end of the day; or watching a lawn developed at a cost of several hundred dollars and years of work shrivel up and die. You may want to check with the two hotel chains that decided to build in Maryland and South Carolina instead of Virginia Beach. Future water demands and the inability of area water supplies to meet those demands have been thoroughly documented as far back as 1970 by a number of independent organizations as you will hear today.

2. Virginia Beach does not waste water. On the average, Virginia Beach residents use only about two-thirds of what the average Virginian uses and only one-half of what the average North Carolinian consumes under similar conditions. The City has a solid conservation program which includes building code modifications to ensure the use of water-conserving devices in all plumbing and a rationing plan for droughts. If you visit Virginia Beach and dine out, you might have noticed that you were not served water unless you requested it.

3. This project will not limit development at Pea Hill Creek or anywhere else in the watershed. Kerr, Gaston, and Roanoke Rapids all have a Class-A water quality designation which is suitable for drinking water and primary recreation. There are existing water supply intakes upstream. It is unthinkable that either state or the localities themselves would promote development to the extent that the water quality designation would be lowered. Water quality requirements for primary recreation are practically the same as those for drinking water. Given the ability of the treatment plant to remove much of the development-oriented pollution, it is the perimeter interests around the lakes that would probably demand water quality controls long before Virginia Beach.

4. The reallocation of 10,200 acre-feet (two or three inches) of storage in Kerr Reservoir will allow the Corps of Engineers to release additional flow to compensate of Virginia Beach's withdrawal during critical periods, so flow in the Roanoke River will not be impacted. These additional releases from Kerr Reservoir will result in an additional drawdown over what would normally occur without the Virginia Beach project. The Wilmington District Corps of Engineers, The City of Virginia Beach, and the State of North Carolina have all modeled this additional drawdown and have found it to be insignificant during a severe drought. Lake Gaston and Roanoke Rapids reservoirs will not be impacted by the withdrawal.

5. Minimum releases from the Roanoke Rapids Reservoir are dictated by Vepco's Federal Energy Regulatory Commission license. Neither Vepco nor the City proposes to change those release requirements. Therefore, low flows in the Roanoke River will not be reduced.

6. The Maximum withdrawal of 60 million gallons per day represents about one-half of one percent of the normal surface inflow to Albemarle Sound. This does not include a tremendous amount of groundwater exfiltration. The withdrawal also represents a very small percentage of the total water that evaporates from the Sound and from the impoundments in the basin every day. Although concerns for Albemarle Sound were raised at previous public hearings, no description of the nature or the form of these impacts was given. The minute size of the withdrawal compared to the physical parameters of the Sound and its tidal influence make it difficult to conceive of any types of impacts.

7. The opposition constantly indicates that Virginia Beach would have plenty of water if it would just clean up its own polluted sources. No one has ever identified these so-called polluted water sources, so we are not sure what they are talking about. Perhaps they refer to the James River and Chesapeake Bay which happen to be tidal (therefore salty) for great distances from Virginia Beach. In any case, blaming southeast Virginia for pollution in the James River or the Chesapeake Bay is like blaming the City of New Orleans for pollution in the Mississippi River. While we are on the subject of pollution, it should be noted that the Roanoke River has a much lower quality classification downstream from the Roanoke Rapids Reservoir. The reason: cadmium, fecal coliform, foaming agents, iron, lead, manganese, and mercury.

8. It has been implied that the City chose Lake Gaston without a thorough study of all the alternatives. I am not sure anything could be farther from the truth. The City is not the only entity to identify Lake Gaston as the most logical source. The Norfolk District Corps of Engineers, the Virginia Department of Health, Virginia State Water Control Board, and the Southeastern Public Service Authority have all identified Lake Gaston as the best overall source. Does anyone here really believe the City would go through this gruelling permit process for the privilege of spending $200 million which in turn will raise water rates by fifty to one hundred percent if there was a better alternative? If Lake Gaston is not the best alternative, why hasn't the opposition produced one qualified professional engineering study identifying a better solution?

9. The 60-inch pipeline is not over-designed. Sixty million gallons per day flowing through a 60-inch pipeline equals a design velocity of 4.75 feet per second. It is a well-known fact that four to five feet per second is the recommended design velocity for water transmission lines. The City of Raleigh is currently installing a 54-inch pipeline to carry the increased water capacity from a recent treatment plant expansion of 37.5 mgd. This equals a pipeline design velocity of 3.65 feet per second or

twenty-three percent less than Virginia Beach's design. We would suggest that if the State of North Carolina is unable to properly assess the prudent carrying capacity of the proposed Virginia Beach transmission main, they contact the Raleigh Department of Public Utilities for assistance.

10. Mr. Rufus Edmiston indicated that Virginia Beach would need an act of Congress in order to obtain the proposed reallocation. That would be true except Congress, in its wisdom, excluded reallocations less than 50,000 acre-feet in order to allow the Corps some latitude in dealing with small and insignificant reallocations. Virginia Beach's reallocation request is for 10,200 acre-feet.

11. Interbasin transfer of water is currently practiced throughout both states, and there are existing interbasin transfers of water in and out of the Roanoke River Basin by both states. It would appear that not all concerned parties are as fully informed about the interbasin transfer of water as they should be. The City is aware of one locality that was calling for a ban on interbasin transfer of water, apparently not realizing that its entire water and sewer system constituted an interbasin transfer.

12. Virginia Beach's Environmental Report has been called inadequate, however, the State of North Carolina seemed to rely quite heavily on the data contained in the report in making its remarks at public hearings. The City would be pleased to review and comment on any documentation which would specifically address the alleged shortcomings.

13. If property values around Lake Gaston and Kerr Reservoir have truly declined as a result of this proposal, it seems that such an occurrence would be easily documented through yearly property assessments made for tax purposes. The City would be most interested in reviewing any professionally conducted study of property assessments.

I could continue but time does not permit. I would like to add that it is doubtful that the opposition would embrace the results of an environmental impact study any more than they have the existing environmental assessment, unless it resulted in a recommendation other than Lake Gaston. All the evidence I have seen to date suggests that an environmental impact statement would only reaffirm the assessment, not contradict it.

Therefore, on behalf of the City of Virginia Beach, I fully support the Corps of Engineers Final Finding of No Significant Impact resulting in the issuance of a withdrawal permit, and urge you not to change the rules on us in mid-stream. Especially, when it is clear that the environment is adequately protected with the current Environmental Policy Act. There is no evidence that an EIS is necessary or proper.

TESTIMONY OF AUBREY V. WATTS, JR., DIRECTOR OF PUBLIC UTILITIES, CITY OF VIRGINIA BEACH

Mr. Chairman, my name is Aubrey V. Watts, Jr. I am Director of Public Utilities for the City of Virginia Beach. My remarks today are as a representative of Virginia Beach and the other communities of Southeastern Virginia who have indicated a willingness to participate in this project with us. On July 15, 1983, I filed an application with the Virginia Marine Resources Commission and the Norfolk District, United States Army Corps of Engineers to develop a water supply source for our communities. This source is intended to meet the needs of Southeastern Virginia for a 50 year planning period or through the year 2030 at which time the withdrawal would be an estimated 60 mgd. This 60 mgd maximum [1] withdrawal represents: (a) 48 mgd for the City of Virginia Beach, (b) 10 mgd for the City of Chesapeake, (c) 1 mgd for the City of Franklin, (d) 1 mgd for Isle of Wight County.

Withdrawals would commence, at the time of project completion, at approximately 10 mgd and increase as demand necessitates until the maximum withdrawal of 60 mgd is attained at approximately 2030.

As most of you are aware, the water resource problem in Southeastern Virginia has been studied for more than 20 years and well over 30 alternatives have been considered and evaluated. Our decision to proceed with the Lake Gaston project was based upon an analysis of all of these alternatives and a combination of alternatives which were evaluated on a basis of: (a) first and foremost the environmental impact, (b) the quantity of water available, (c) the quality of water available, (d) the reliability of the source, (e) the cost of the program, (f) and finally legal, political, and institutional issues associated with the alternative.

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[1] (Not 250-200 mgd.)

This analysis indicated that the Lake Gaston alternative was feasible from an engineering standpoint, was economically viable, and was the least disruptive to all the communities involved and the environment.

Virginia Beach considered many different alternatives in the pipeline routing. Those alternatives considered were routes: (a) adjacent to an existing gas pipeline, (b) the utilization of active and inactive railroad right of way, (c) the utilization of power and telephone right of way, (d) the use of existing highway right of way, (e) the approach of a straight line with the acquisition of a completely new right of way.

Eleven major routes and many combinations of routes were considered. We identified major concerns in the following areas:

a. Environmentally Sensitive Wetlands: (1) Southeast of Emporia (along Meherrin River Basin), and (2) Crossings near Courtland Virginia (Nottoway River Basin).

b. Major Traffic Concerns: (1) Through the City of Emporia, (2) Near ByPass North of Emporia, (3) Through the Courtland community, and (4) Along Route 58 (where highway is 2 lanes and passes through small communities).

c. Commercial timber and agricultural disruption and environmental impact of a new cross country route.

d. Larger number of property owners disrupted if we did not follow existing right of ways and easements.

e. Concern for development and recreation interest in Pea Hill Creek area (expressed in previous public meetings in which Virginia Beach solicited input from communities surrounding the project area).

The route which was selected is 85 miles long and will address all of the above concerns and is clearly the least disruptive to individual property owners, communities, wetlands, business, and commercial activities. The Route selected is entirely within Virginia and will: (a) utilize 8 miles of highway right of way in Suffolk (Red Top to Windsor), (b) adjacent to existing Norfolk pipeline for 9 miles in Isle of Wight & Southampton (Windor to Walters), (c) utilize 33 miles of inactive and abandoned railroad right of way Sussex and Southampton Counties (Walters to Jarrett), (d) adjacent to active railroad for 8 miles in Greenville County (Jarret to Purdy), (e) within Vepco powerline easement for 21 miles in Greenville & Brunswick Counties (Purdy to near VA/NC line near Bettingfield Creek), and (f) traverse private property in Brunswick County for approximately 6 miles.

I would like to take a few moments to show you slides of the pipeline route and discuss some other issues which relate to the project which we feel are important.

SLIDES OF LAKE GASTON WATER SUPPLY PROJECT

1. Permit Application and Environmental Report which contains substantially the information required in an EIS.

2. Roanoke Basin and Pipeline Map (75% in VA) (6 MGD flow at mouth of River) (9,580 square miles drainage area).

3. Communities which pipeline traverses (Major rivers) (Blackwater, Nottoway and Meherrin).

4. Western Branch Reservoir (Norfolk withdrawal structure 60 MGD).

(a) Highway right-of-way

5. Pipeline Route from East to West—Red Top area with Western Branch Reservoir in the Background (point of connection with existing Norfolk lines) (Rt 634 & Rt 10) (buried pipeline).

6. Proceeding West Along Route 634.

7. Intersection of Route 634 and Route 460.

8-9. Proceeding Northwest along Route 460.

10. Intersection of Route 460 and Route 636.

(b) Norfolk pipeline easements and right-of-way

11. Norfolk outfall from the Blackwater and Nottoway River Pipelines (near Norfolk and Western Railway) Southeast of Windsor.

12. Norfolk pipeline route looking to the West—location is South of Windsor (Norfolk pumping station).

13. Norfolk pipeline crosses through trailer park South of Route 258 (May require temporary relocation of 4 trailers—only buildings affected by project).

(c) Abandoned railroad right-of-way

14. Abandoned railroad at Town of Walters—intersection of abandoned railroad and Route 258—(pipeline interaction southeast of Walters).

15. Abandoned railroad and Blackwater River.
16. Abandoned railroad and Sedley.
17. Abandoned railroad and Assamoosick Swamp.
18. Abandoned railroad and Sebrell (Use of existing pillers).
19. Abandoned railroad and Nottoway River (Use of existing pillers).
20. Abandoned railroad and typical highway, woods, and farm (no disruption).
21. Abandoned railroad and I-95 and US 301.
22. Abandoned railroad and Highway 301 (close-up) (use existing underpass).

(d) Active railroad right-of-way

23. Active railroad and industrial facility at Jarrett.
24. Active railroad, Highway 608, and Vepco 500 KV power line near Purdy.

(3) Vepco Easements

25. Vepco 500 KV power line crossing plowed field.
26. Vepco 500 KV power line crossing Meherrin River.

(f) Private property to Pea Hill Creek

27. Lake Gaston, Roanoke Rapids Reservoir, and Vepco 500 KV power line (cross Route 46 and 669).
28. Lake Gaston Dam.
29. Route 625 Bridge at Pea Hill Creek—marina area (original 1977 COE withdrawal site).
30. Pea Hill Creek—Roanoke River in background—showing new intake site.
31. Pea Hill Creek showing new intake site and bridge at the mouth of Pea Hill Creek.
32. Pea Hill Creek and 33. Lake Gaston: levels are the same except for wind tides—flow in and out of Pea Hill at NC 1214 bridge caused by Vepco raising and lowering lake level 1 ft. in 12 hours is 20 times greater than 60 mgd withdrawal.
34. Lake Kerr—NC and Va. Beach modeled 3 impoundment systems (independently)—(Beneficial impact of Smith Mountain Lake and Phillpot—.2 ft. COE Wilmington, NC).
35. Pea Hill Creek Intake Location Map (all construction in Virginia).
36. Intake Screen (typical in use throughout country).
37. Proposed Intake Screen Size (less than dime thickness) (1 mm).
38. Sailboat near intake structure (Va. Beach withdrawal=less than 1/20 of Vepco generated velocity in Pea Hill Creek.
39. Water Surface profile for Roanoke River (flood control and power pool).
40. Elevation and Volume—Lake Kerr (rule curve).
41. 1980-81 Elevation and Volume—Lake Kerr plus level with 60 mgd withdrawal. The 1980-81 drought was equal to the 1930-34 drought.
42. Publicly Supplied Water Use (refer to Virginia Beach Conservation Programs and Rates) (Conservation Program I. Plumbing Code, II. Maintenance Program, less than 5% loss, III. Education & Publicity, IV. Price & Penalties) (Real Impact: Virginia Beach will use 7-12% less water per capital in 2030)—17-26% since 1976-2030).
43. Flow comparison of the Roanoke River and Virginia Beach's request (VA .60, NC .57, VB .06 BGD=Less than 40% of average annual minimum flow).
44-45. Summary of environmental issues: Archaeological Phase I Evaluation currently underway (thus far, no significant findings).

A summary of the 66 mitigation measures provided by Virginia Beach and incorporated in our approved permit is included in my written testimony. (I will not take up your valuable time by reading all of these items but they are comprehensive and prove Virginia Beach's concerns for begin a responsible environmentally sensitive community.)

SUMMARY OF MITIGATION MEASURES

Hydrology/drainage/flooding

1. Use of railroad piers or subaqueous crossings for river and stream crossing.
2. Avoidance/minimization of work in or creation of obstructions in floodplain.

Navigation

3. Use of buoys to mark construction area/intake area.
4. Subsurface intake avoids obstruction at Pea Hill Creek.
5. Scheduling construction to avoid peak use periods.
6. Use or railroad piers or subaqueous crossings.

Water quality

7. Location of intake structure.
8. Utilization of typical soil erosion/sediment control techniques during construction.
9. Expedient revegetation of disturbed ground.
10. Avoidance of environmentally unacceptable herbicide use for corridor maintenance.

Shoreline erosion and accretion

11. Utilization of typical erosion/sediment control measures.
12. Maintenance of Lake Gaston/Pea Hill Creek water elevation.
13. Expedient revegetation of disturbed ground areas.
14. Intake structure location and design to limit rate of flows.

Wetlands/bottomlands

15. Avoidance during design and construction to the extent possible any direct impact or activity in any wetland/bottomland or floodplain.
16. Minimization of the extent of intrusion and/or impact to any wetland/bottomland or floodplain.
17. Reuse of excavated material as fill wherever possible.
18. Regrading to natural contours and reestablishment of natural vegetation wherever possible.
19. Avoidance of disruption to natural hydrologic patterns, repair or improvement of affected wetlands and/or natural drainage system.
20. Utilization of mats for construction equipment access.
21. Expeditious revegetation with fast growing grasses to stabilize soil as soon as possible after construction activity in an area is completed.
22. Prohibition of herbicide used in corridor maintenance and vegetation control whenever other means such as mechanical clearing is available. Any herbicide used will be approved by local, state and federal regulatory agencies.
23. Maintenance of necessary access for fire control and lumber activities.
24. Provision of designated crossing points for timber clearing operations.

Agricultural land

25. Stockpiling and replacement of topsoil.
26. Construction activity to occur only during non-growing seasons.
27. Burial of the water transmission pipeline at a depth greater than normal tillage levels.
28. Maintenance of access to all farm land and pastures.
29. Utilization of special precautions such as temporary fencing in grazing lands to keep livestock from work areas and from construction access roads.
30. Minimization of the extent of land/vegetation impacts to as narrow a work corridor as is practical.
31. Implementation of all appropriate erosion and sediment control measures as described in Sections C. and F. of Environmental Report.
32. Limiting size and number of construction vehicles and machinery used in project construction.

Natural vegetation

33. Utilization of existing disturbed corridors and land areas to avoid disturbance of mature natural vegetation.
34. Minimization of vegetation clearance to the area absolutely necessary for the project corridor, including flagging of the work corridor to avoid accidental overcutting and to avoid specific significant vegetation areas;
35. Limiting size and number of construction vehicles and machinery used in project construction;
36. Judicious planning of access and staging areas to avoid sensitive habitat areas;
37. Utilization of the various appropriate erosion and sediment control measures described in Section C of the Environmental Report to avoid and ameliorate indirect off-site impacts to natural vegetation;
38. Expeditious revegetation with fast growing grass to stabilize soil as soon as possible after construction activity in an area is completed;
39. Prohibition of environmentally unacceptable herbicide use in corridor maintenance and vegetation control following project completion.

Fish and wildlife

40. Implementation of various sedimentation control measures previously discussed in order to limit advance impacts to aquatic species during and directly following construction.

41. Avoidance of in-channel construction activities during critical periods in the preproductive and juvenile life stages of aquatic species.

42. Reallocation and flow management practices in Kerr and Gaston to permit sufficient flows for striped bass during spawning.

43. Avoidance of disruption of significant habitat areas and avoidance of impacts, to the extent possible, in all vegetation areas.

44. Intake structure design to ensure low intake velocity limiting problems of entrainment and impingement of larval and juvenile stages of fish and other aquatic species.

45. Construction of artificial spawning areas to ameliorate or compensate for any possible losses to fish species due to impingement and entrainment.

Air quality

46. Utilization of water or other appropriate surface stabilizing agent to limit fugitive dust during construction.

47. Required maintenance of all construction machinery and vehicles in conformance with manufacturer's emission standards.

Noise

48. Limitation of construction activity to daytime hours.

49. Employment of additional noise mufflers on equipment that can be so supplied.

50. Institution of a policy regarding maintenance of all equipment is good repair.

51. Use of portable noise barriers if extreme situations arise.

Land use impacts

52. Implementation of applicable air quality, noise vegetation and erosion and sedimentation control mitigation measures to avoid indirect impacts to adjacent properties during construction.

53. Choice of a relatively undeveloped area for the proposed intake structure.

Physical infrastructure

54. Contact and coordination with pertinent utility agencies and companies.

55. Maintenance of necessary buffer or "clear zone" around certain utility lines.

56. Application of appropriate technology and methodology in all utility and infrastructure crossing.

57. Use of appropriate traffic control precautions during construction.

Energy resources

58. Utilization of all reasonable energy conservation measures and technology in construction, operation, and maintenance of the system.

Mineral needs

59. Utilization of excavated material as backfill wherever suitable.

Historic Archaeological impacts

60. Use of established previously disturbed corridor minimizes archaeological potential.

61. Undertaking of a Phase I archaeological survey prior to final design.

62. In the event that previously unknown archaeological resources are uncovered during construction, temporary postponement of work activities in that area to permit assessment of archaeological value, documentation and if warranted, recovery or preservation of the materials.

Aesthetics and safety

63. Implementation of appropriate vegetation mitigating measures to limit aesthetic impacts.

64. Use of compatible architectural design and site landscaping for pump stations.

65. Use of subsurface intake to avoid impacts to recreation use in Pea Hill Creek.

66. Use of appropriate safety precautions (i.e., flagmen, signing, etc.) at road crossings.

Where are we today?

48. U.S. Coast Guard—Determination on November 10, 1983, that a Permit was not required.

49. The Virginia Marine Resources Commission Permit was issued on October 4, 1983.

50. The State Water Control Board Permit was issued on 9/12/83, modified on 1/9/84.

51. The U.S. Army Corps of Engineers FONSI was completed and statement of findings was issued on 1/9/84.

52. The U.S. Army Corps of Engineers Section 10 Permit was issued on 1/9/84.

53. The Wilmington District Army Corps of Engineers issued a Finding of No Significant Impacts for reallocation of water in the John H. Kerr Reservoir on 1/13/84.

54. A Contract between the United States and the City of Virginia Beach for water storage space in John H. Kerr Reservoir was signed on 1/30/84 and payment of $2.275 million has been made.

55. Two suits were filed in U.S. Federal District Court (Eastern Virginia) on 1/9/84 seeking a: (1). Declaratory judgement to uphold Section 10 Permit, (2). Class Action to decide various riparian rights issues.

56. Environmental Report and Permit Application

There has been ample opportunity for public review of this project. In excess of 15 public forums have been held with over 50% of the these meetings being held in the communities around Lake Gaston and in North Carolina. See the following list:

PUBLIC HEARINGS

U.S. Army Corps of Engineers

Date Location: 3/12/76, Norfolk, Virgina;[1] 5/23/77 South Hill, Virginia;[1] 11/21/77, Roanoke Rapids, N.C.[1]—Gaston not included but letter from SWCB recommending reconsideration of Gaston entered into the record. 6/12/78, Emporia, Virginia;[1] 8/25/83, Lawrenceville, Virginia;[2] 11/14/83, Roanoke Rapids, N.C.;[2] 11/17/83, Virginia Beach, Virginia.[2]

Virginia State Water Study Commission

Date Location: 9/22/82, Clarkesville, Virginia; 9/23/82, Virginia Beach, Virginia; 11/30/82 West Point, Virginia; 12/14/82, Suffolk, Virginia; 8/11/83 Richmond, Virginia.

PUBLIC MEETINGS

Southeastern Water Authority of Virginia

Date Location: 9/25/75, South Hill, Va.

C.E. Maguire for the City of Virginia Beach

Date Location: 5/3/83, Lawrenceville, Va.; 5/4/83, Emporia, Va.—Workshop; 5/5/83, Virginia Beach, Va.

SUMMARY OF ENVIRONMENTAL ISSUES

1. This is a Southeastern Virginia Water Supply Project and is intended to meet the needs of this large geographical area for a 50 year planning period. This project is necessary to protect the health, safety, economic vitality and welfare of southeast Virginia, including the defense installations herein. Is locally funded and is located entirely within Virginia.

2. Delays in the project are projected to increase the cost of the project by about $1 million per month as a result of inflation, as well as increase the frequency and severity of water shortages which will occur prior to project completion.

3. There are no significant long-term environmental impacts as confirmed by the Corps of Engineers Norfolk District on 1/9/84, and Wilmington District on 1/13/84.

4. We selected a route of least disruption to communities, individuals, & environment as confirmed by Governor Robb and the Council on the Environment.

5. The Corps of Engineers Wilmington District, in N.C., has determined that under the worst conditions (1 in 100 years) the maximum impact in Lake Kerr of the 60 mgd withdrawal is .2 ft. (2.5").

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[1] Water Supply Study for Southside Hampton Roads, Virginia.
[2] City of Virginia Beach Lake Gaston Project Permit Application.

6. This request is for a logical, reasonable use of an important and large resource as reconfirmed by U.S. COE Wilmington, N.C., 1/13/84.

7. Previous flood waters were a force of destruction and now are a precious resource which should: (1) be shared, (2) be utilized responsibly, and (3) not be lost to the ocean with no resultant benefit.

The 1977/78 and 1980/81 drought proved we do not have sufficient water resources to meet the needs of our communities as they exist now. Future droughts will require similar or greater water restriction and their associated economic impacts and impacts upon our large military community.

Virginia Beach has followed the directions of the U.S. Army Corps of Engineers. It is not our intention to solve our problem and create a worse problem for other community or state. We have followed the intent and spirit of the National Environmental Policy Act. We have repeatedly gone the extra mile to meet with interested parties and evaluate alternatives to ensure that there is no long term detrimental environmental impact in Virgina or North Carolina as a result of this project.

Thank you for your attention and interest.

Mr. EDGAR. Please proceed.

TESTIMONY OF A PANEL CONSISTING OF HON. LOUIS R. JONES, MAYOR, VIRGINIA BEACH, VA.; THOMAS H. MUEHLENBECK, VIRGINIA BEACH CITY MANAGER; AND AUBREY WATTS, CITY UTILITIES DIRECTOR, VIRGINIA BEACH, VA.

Mayor JONES. Thank you, Mr. Chairman.

Mr. Chairman, my name is Louis Jones, I am the mayor of the city of Virginia Beach, Va., and I am here representing the city of Virginia Beach. I also have with me Mr. Thomas H. Muehlenbeck, who is the city manager of our city, who is on my right and your left; and Mr. Aubrey Watts, who is the director of our Department of Public Utilities with the city of Virginia Beach, who quite frankly is the technical data expert for our city, and I think that you are going to find that the information that he will be presenting to you today will answer many of the questions that have been previously raised by members of the panel, as well as the other people who have spoken and testified today.

With your permission, Mr. Chairman, I would respectfully request that I be allowed to have Mr. Watts begin the testimony on behalf of the city of Virginia Beach, because it does present in vivid detail the technical data, and then I would ask that Mr. Muehlenbeck and I be asked to sum up afterwards.

Mr. EDGAR. Without objection, proceed.

Mayor JONES. Thank you, sir.

Mr. Watts?

Mr. WATTS. Mr. Chairman, my name is Aubrey V. Watts, Jr., I am the director of public utilities of the city of Virginia Beach. My remarks today are as a representative of Virginia Beach and the other communities of southeastern Virginia who have indicated a willingness to proceed with this—in this project.

On July 15, 1983, I filed an application with the Virginia Marine Resources Commission and the U.S. Army Corps of Engineers, Norfolk District, for a permit to develop a water supply source for our communities. This source is intended to meet the needs of our communities for a 50 year planning period, or through the year 2030. It provides for a maximum withdrawal of 60 million gallons per day. This 60 million gallons a day would be broken into 48 million gallons per day for the city of Virginia Beach, 10 million gallons per

day for the city of Chesapeake, 1 million gallons per day for the communities of Franklin and Isle of Wight County.

Withdrawals would commence at the time of the project completion at approximately 10 million gallons per day, and would increase as demand necessitates, until the year 2030 when the estimated withdrawal would be a maximum of 60 million gallons per day.

As most of you are aware, the water resource problem in southeastern Virginia has been studied for well over 20 years, and well over 30 alternatives have been considered and evaluated. Our decision to proceed with the Lake Gaston project was based upon an analysis of all of the various alternatives available to us, and quite frankly, combinations of alternatives. They were all evaluated first with an evaluation on the impact on the environment, the quantity of water available, the quality of water available, the reliability of the source, the cost of the program and various legal, political, and institutional issues.

This analysis indicated that the Lake Gaston project was not only engineeringly feasible from an engineering standpoint, but was economically viable, and was also the least disruptive to all of the various communities.

We also considered many different alternatives to the pipeline routing; 11 major routes and combinations of routes were considered. The route which was selected is 85 miles long, and is clearly the least disruptive to all of the various property owners, communities, wetlands, business, and commercial activities, and the environment. The route which was selected is entirely within the Commonwealth of Virginia, and utilizes highway right-of-way, abandoned highway right-of-way, existing easements, Vepco powerline rights-of-way, and would traverse private property for approximately 6 miles in Brunswick County.

I would like to take a few minutes to show you some slides of the project which I think will answer many of the questions which were brought up this morning concerning some of the location, the topography and the size of the project involved. It may be necessary that we cut down some of the TV lights.

Mr. Chairman, the document on the right is a permit application which we filed with the Corps of Engineers in July 1983.

The document on the left is an environmental assessment which was prepared by Virginia Beach. It includes some 300 pages of documents which are literally summaries of over thousands of pages of information.

These two documents were filed with the U.S. Army Corps of Engineers, and the various State regulatory agencies.

The Roanoke River basin is an extremely large basin. It encompasses approximately 9,580 square miles of drainage basin, approximately 75 percent of the basin above the point of withdrawal is located within the State of Virgina. There are three major impoundments on this river system. The lower impoundment is Lake Roanoke Rapids impoundment, upstream of that is the Lake Gaston impoundment, from which we would be making the withdrawal, and upstream from that is the Lake Kerr Reservoir.

Mr. ROE [presiding]. Could the gentleman yield at that point?

You mentioned roughly 10,000 square mile river drainage basin.

Does the preponderance of the water come from one State or the other?

Mr. WATTS. Yes, sir. The vast majority of the water does come from within the State of Virginia, with some 25 to 30 percent of the water being contributed downstream in Carolina.

Mr. ROE. OK.

Mr. WATTS. This slide gives you some idea of the pipeline route which was selected. It does cover a very rural section of Virginia, and does go through several different counties and smaller communities, but we have taken great care to avoid various wetlands, areas which we consider to be sensitive.

The end of the pipeline, on the eastern end, is near the city of Norfolk's intake, and one of their reservoirs at Lake Western Branch. Just to the south of this, in an area called Red Top is where the connection would be made to existing raw waterlines going to the various treatment plants within the various communities that are participating in the project.

Looking at the pipeline route towards the west now, we would follow this portion of State highway to an intersection with a U.S. Highway 460, we would then proceed up Route 460 towards a community of Windsor, Va.

At this point we would get off of the State highway system, and would proceed to the headwaters of Lake Prince, which is an area where some existing pipelines come in from the Blackwater and Nottoway Rivers, which are currently utilized by the city of Norfolk.

At this point we would parallel the Norfolk right-of-way, and you can see how it goes out through the predominantly timberland areas of southeastern Virginia.

We would cross one trail, or park, and to the best of our knowledge, these are the only four dwelling units that would be affected by the project, and they would have to be relocated during the construction.

We would continue to—near the Town of Walters, where we pick up an abandoned railroad right-of-way, the ties and rails have been removed, and we will follow this railroad for approximately 33 miles.

The entire pipeline route, the pipe will be buried, except for some areas where it goes over rivers.

This is an example of the river crossing of the Blackwater River. We would utilize existing abandoned railroad pillars, and we would not have to do any construction in the sensitive land areas.

This gives you an indication of what it looks like when it passes through a small town, and you can see that we would utilize the railroad right-of-way, and would stay away from all of the highway network within the communities.

This is a crossing of an area called the Assamoosick Swamp, it would go over a culvert at this area but we would be able to avoid this environmentally sensitive area.

This is an indication of going through one of the smaller communities. We would be able to utilize an existing overpass that was there for the railroad before it was abandoned, and therefore not have any impact upon highway considerations.

This is the Nottoway River, which is an extremely wide river basin here, we will be able to totally avoid any environmental impacts here by being able to utilize these same pillars, and not get into the wetlands with their construction.

This is an indication of what the right-of-way looks when we proceed through some timberland and agriculture land. We have taken great effort to minimize the impacts on these two primary sources of income in this part of the State.

The timberland was already cleared for the railroad, and we would not have to clear additional right-of-way.

Agricultural activities could continue to the north and south of the pipeline.

This is the interstate highway. We would have to bore under Interstate 95, and going under Route 301, we would simply utilize existing highway rights-of-way.

We would continue to the west, this is an industrial area near the Town of Jarrett, Va. We would locate the pipeline to the south of this, and would be able to proceed through the area in existing railroad right-of-way.

Near the town of Purdy we would get off of the abandoned railroad, and would follow Vepco right-of-way for the vast majority of the remainder of the pipeline route, to the Pea Hill Creek area.

We would have to construct another crossing to the Meherrin River, but we have made commitments to make that construction such that it would not impede in any way any of the recreational activities currently utilized on that river.

This is what the right-of-way looks like as it proceeds down towards the State of North Carolina. The North Carolina line is located in this area.

Lake Gaston is to the right, Lake Roanoke Rapids to the left.

This is the Lake Gaston impoundment, and the planned point of withdrawal is in the upper right-hand portion of this screen.

In 1977, the Corps of Engineers originally recommended an intake structure at this location, but because of the development activities and recreational activities that have been constructed in the area, we have changed the location to a point further downstream in the creek area, and a point about 1 mile closer to the main body of the river.

You can get some idea of that location here, compared to the main body of Lake Gaston.

This is a shot of what Pea Hill Creek area looks like, and Lake Gaston, which is the main body on which we would be withdrawing water.

This is Lake Kerr, which is the upstream impoundment, above Lake Gaston. We have entered into a contractual arrangement with the U.S. Government, and have actually purchased 10,200 acre feet of storage space in this reservoir, and have paid the Government approximately $2¼ million for this right to storage.

This shows the intake structure and the pipeline coming out of the area, heading back to the east, and as you can see, the withdrawal location and the entire pipeline are located within the Commonwealth of Virginia.

The intake structure that we are using is very similar to that which is utilized in other parts of the country, however, we have

made the screen size much smaller, it is 1 millimeter in width, a dime on its edge, for example, will not go through it.

We have also worked with the Fish and Wildlife people to ensure that the area of the screen is so sufficient that we would not impede or impinge fish eggs or larva.

There were some concerns expressed by various people that we would—our intake would possibly have some impact on recreational and boating interests.

There is a very similar intake structure located approximately 10 feet of the bow of this same boat, and as you can see, there is no impact on the surface of the water.

Mr. ROE. Would the gentleman yield at this point?

Are there other water supply systems that are taken? Is this Lake Gaston we are looking at here?

Mr. WATTS. This particular slide is not of Lake Gaston.

Our purpose in showing this slide was to indicate that there are intake structures of a similar design in other parts of the country.

Mr. ROE. But not in Lake Gaston, per se?

Mr. WATTS. No, sir.

Mr. ROE. To your knowledge?

Mr. WATTS. No, sir. There are other withdrawals from the river system for the city of Clarksville, and for some other communities in Carolina, where withdrawals are made from this river system.

Mr. ROE. Well, let us amplify on that. Part of the concern is the integrity of the original intent of this dam and what it was supposed to do. I am talking about Kerr Lake. I believe that Lake Gaston was built later, it was built by a power company, at their own costs. That is our understanding.

Mr. WATTS. Yes, sir.

Mr. ROE. So, therefore, when Kerr Lake was built, it was built to do a certain thing, namely the stream flow augmentation, flood control, et cetera, et cetera, et cetera.

Now, are you saying to the committee that there are other water supply systems that have been drawn from this system?

Mr. WATTS. Yes, sir, that is correct.

Mr. ROE. Are they drawn by both States, namely Virginia and North Carolina?

Mr. WATTS. Yes, sir, that is my understanding.

Mr. ROE. OK, thank you.

Mr. WATTS. The river system—now, this is a profile of the river, Lake Roanoke Rapids is the impoundment to the right, it has storage capacity of approximtely 26 billion gallons; Lake Gaston is the center impoundment here and has a storage capacity of about 147 billion gallons, and Lake Kerr is the upstream impoundment and has a storage capacity with the flood storage of approximately 900 billion gallons, but the normal body of the lake has a storage capacity of about 465 billion gallons. Our plan is based upon a withdrawal from Lake Gaston with an equal amount of water released from Lake Kerr, such that the lake levels in Lake Gaston and Lake Roanoke Rapids would not change as a result of this project and any impact that would be felt would be felt in the upstream impoundment of Lake Kerr which is a significantly larger reservoir.

Lake Kerr is regulated by the Army Corps of Engineers under a management scenario which they call a rule curve. They try to

maintain the lake at the levels which are shown by the red line and, as you can see, during certain periods of the year they try to bring the lake down, primarily during the winter months to allow for storm drainage runoff into the basin area. During the summer or early spring they try to build the lake back up to allow downstream flow requirements for activities such as the fish spawning, particularly the striped bass downstream of Roanoke Rapids Dam.

This is the way the corps tries to manage the reservoirs. During the 1980–81 drought, this area plus southeastern Virginia did experience severe water problems. The black line indicates to you what the actual lake levels were during that period of time, and the red line indicates the worst case scenario of what those levels would have been if the full 60 billion gallons today was withdrawn. The Corps of Engineers has estimated that that impact would have amounted to approximately 2½ inches, approximately once in every 100-year drought, which is not significant based on testimony that you heard today where the lake level already fluctuates, it was indicated 7 feet at times, it has fluctuated as much as 17 to 22 feet. So the 2½ inches is not significant.

This slide indicates to you the use of publicly supplied water within the State of Virginia and the State of North Carolina. What we are trying to indicate to you is that water is a very precious resource to our communities. Within the entire State of Virginia we utilize approximately 600 million gallons of water a day serving 3,860,000 people, or approximately 155 gallons per person per day. In the State of North Carolina, they utilize 570 million gallons a day to serve 3,110,000 people, or 183 gallons per day. Our projection for the period of time that is involved in this project is that the Virginia Beach consumers will utilize approximately 101 gallons per day which is substantially less than the other communities in Virginia and Carolina, and it is substantially less than the national average.

This slide is intended to give you some idea of the magnitude of the Roanoke River. At the point of withdrawal that we have proposed, the average flow in the river is 5.2 billion gallons per day. And the low flow or the minimum is about 2.1 billion gallons per day. Suffice it to say if you really wanted to, you could serve the entire populations of Virginia and North Carolina and the 60 million gallons which we are seeking with this permit and still not use up all of the flow in the river.

We are certainly not suggesting that, but we do want to indicate to you that it is a substantial resource.

This slide indicates to you many of the activities in various aspects of the projects which were evaluated as part of our environmental process.

In all of these areas which were examined, it was found that there was no significant long-term environmental impact as a result of this project. Much question has been raised today about the various agencies which were given the opportunity to comment or not to comment on this project. There were some 38 State and Federal agencies which were supplied information on the projects and given the opportunity to comment. Certainly EPA, Fish and Wildlife, and many other Federal agencies were among those. They

all had the opportunity to request full-blown environmental impact statements. However, none of those agencies did.

There were some 66 mitigation measures which are proposed by Virginia Beach and made a part of the contract, and all of those items are listed in my testimony that I will not bore you with reading all of those items now.

Our main point would be, one, that Virginia Beach is trying to be a responsible citizen developing this project. We are trying to insure that we do not create an adverse condition for any other communities. The U.S. Coast Guard indicated to us on November 10th that no permits would be required from this agency. The Virginia Marine Resources Commission issued a permit on October 4th for the project. The State Water Control Board in Virginia issued permits for the project in September and then a modification to those in January of this year. The U.S. Army Corps of Engineers issued a FONSI for a finding of no significant environmental impact, and made that a final document in January of this year.

The Corps of Engineers has issued a construction permit for this project. The Wilmington District Corps of Engineers, which is charged with the regulation of the Roanoke River, issued a FONSI statement, an impact statement of no significant impact, in January of this year. We signed a contract with the U.S. Government in January of this year under which we paid the U.S. Government $2.275 million for storage space in Lake Kerr.

Mr. ROE. Is that a one-time charge?

Mr. WATTS. Yes, sir, rather than taking a long-term payment approach, it was a one-time charge. We do have to pay annual operation and maintenance costs which we have already paid the first year's charges under that.

In addition, in order to reaffirm the process as has been indicated earlier today, some litigation has been introduced, reaffirming the permit, and some of the other legal issues that primarily relate to State and Federal concerns.

Gentlemen, also included in my testimony is a listing of many different hearings which took place as specifically relating to this project.

This concludes my slides at this time, and I would like to proceed with some of the remaining portion of our written text. But there have been many different meetings which have been held in both Virginia and in North Carolina relating to this process. Many of those are shown on page 17 of my testimony. We tried to provide ample opportunity for any interested citizen or groups to participate in and provide us information in this project, and certainly Congressman Valentine and other members who have been here today are very aware of some of those efforts.

Let me summarize a couple of things. This is a southeastern Virginia water supply project. Even though Virginia Beach is having to take the lead role in it, it is intended to meet the long-term needs for approximately 50 years of a large geographical area of southeastern Virginia.

It is necessary to protect the health, safety, economic vitality, and welfare of our part of the State, including all of the various defense installations that are located there. It is a locally funded project to the tune of about $176 million and it is located entirely

within the Commonwealth of Virginia. Delays in the project, which we are very much concerned about, could increase the cost by approximately $1 million per month for every month that the project is delayed. But more importantly, it increases the frequency and severity of water delivery problems which we have already experienced very vividly in the 1977 and the 1980 droughts.

There is no significant long-term environmental impact from this project. Virginia Beach has tried to select a route which has cost us tens of millions of dollars in additional costs in capital costs for the project, specifically in an effort to avoid any long-term environmental impact, and that assessment and analysis has been reaffirmed by the Corps of Engineers, both the Norfolk District and the Wilmington District. The route we selected is clearly the least disruptive to all the communities, and Governor Robb and the Council on Environment made that very clear to us from the beginning.

The corps, as I said, has indicated that the maximum drawn down in Lake Kerr as a result of this would be a matter of inches, not feet. This is a logical and reasonable request for an important and large resource, and I think it is important to keep in mind some 30 or 40 years ago the communities in Carolina and Virginia were requesting the Congress to appropriate funds for flood control purposes in this river basin. The Congress appropriated those funds and the corps built Lake Kerr, and the Virginia Electric & Power Co., which serves Virginia and Carolina, built the Lake Gaston and the Roanoke Rapids Dams. In the process, they impounded a resource which was previously a significant problem and source of destruction and have made it an extremely valuable resource. It should be shared, it should be utilized responsibly, and it should not be lost with no resultant benefits. The corps and the Congress in the original authorization legislation for the Lake Kerr project clearly set aside in that project the ability to utilize insignificant amounts of the storage in Lake Kerr for water resource purposes, and they identified specifically the uses of less than 50,000 acre-feet would not be significant. The impact of this project is a use of about 10,000 acre-feet and clearly within the original intent of Congress. Virginia Beach has followed the directions of the Army Corps of Engineers. As you are well aware, it is not our decision as to whether or not an EIS or an EA is required. But this is not a new project. The people in Carolina have registered concerns with this project for many years. Virginia Beach first evaluated the original corps' determination that this was the best source for a solution to the southeastern Virginia problem. We identified and examined many unconventional and untraditional sources of water to meet our problem. This alternative is clearly the least expensive, the quickest solution, and the least environmentally sensitive of all of the projects that we have examined. We would not be spending upward of $200 million for a project that we could not justify was not environmentally sound, and we are extremely close to the people who have to pay for this project. This project has had an opportunity for substantial public involvement and there is not anyone in Carolina or the various interest groups that has not had some opportunity to let us have their opinion on. We distributed well over 600 copies of our environmental report to any interested person with no charge for that. We tried to prepare an environ-

mental report that clearly went much further than the letter of the law.

The Corps of Engineers has been extremely responsible in their efforts to protect the environment. They have never made our job easy and, quite the contrary, it has been an extremely long, involved and tedious process. But the National Environmental Policy Act has been protected, they have done a responsible job of issuing these permits and evaluating the various environmental impacts, and we need to proceed with the projects immediately to meet a very dire need of our portion of the State.

Thank you.

Mayor JONES. I will ask Mr. Muehlenbeck to go next, if I may.

Mr. MUEHLENBECK. If I could just highlight four or five points, and I will conclude my remarks that way.

First of all, Virginia Beach and southeastern Virginia really do need the water. Future water demands and the inability of the area water supplies to meet these demands have been thoroughly documented as far back as 1970 by a number of independent organizations, which you are going to hear about yet today.

I think a second very important point is the critics of the project always say why do you not conserve water? I think it has been documented on numerous occasions that Virginia Beach itself does not waste water. On the average, Virginia Beach residents use only about two-thirds of what the average Virginian uses and only one-half of what the average North Carolinian consumes under similar conditions. Third, in our opinion, this project will not limit development at Pea Hill Creek or anywhere else in the watershed. As has already been stated, there are existing water supply intakes upstream and downstream of this area.

Another point is that the reallocation of 10,200 acre-feet, which amounts to about 2 or 3 inches of storage in Kerr Reservoir, will allow the Corps of Engineers to release additional flow to compensate for Virginia Beach's withdrawal during critical periods so the flow in the Roanoke River will not be impacted.

Minimum releases from the Roanoke Rapids Reservoir are dictated by Vepco's Federal Energy Regulatory Commission license. Neither Vepco nor the city proposes to change those release requirements. Therefore, low flows in the Roanoke River will not be reduced.

Another point. Maximum withdrawal of $60 million per day represents about one-half of 1 percent of the normal surface inflow to the Albemarle Sound. This does not include a tremendous amount of groundwater exfiltration. The withdrawal also represents a very small percentage of the total water that evaporates from the sound and from the impoundment in the basin every day.

Another point. The opposition constantly indicates that Virginia Beach would have plenty of water if it would just clean up its own polluted sources. No one has ever identified the so-called polluted water sources, so we are not sure what they are talking about. Perhaps they refer to the James River and the Chesapeake Bay which happen to be tidal, therefore salty, for great distances from Virginia Beach. In any case, blaming southeast Virginia for pollution in the James River or the Chesapeake Bay is like blaming the city of New Orleans for pollution in the Mississippi River.

While we are on the subject of pollution, it should be noted that the Roanoke River has a much lower quality classification downstream from the Roanoke Rapids Reservoir. There are several reasons for that, ranging from cadmium, manganese, mercury, foaming agents, fecal coliform, iron, and lead.

It has been implied that the city chose Lake Gaston without a thorough study of all the alternatives. I think we have said that could not be further from the truth. The city is not the only entity to identify Lake Gaston as the most logical source. The Norfolk District Corps of Engineers, the Virginia Department of Health, the Virginia Water Control Board, and the Southeastern Public Service Authority have all identified Lake Gaston as a best overall source. It is pretty hard to believe that anyone would charge the city of Virginia Beach, not going through this grueling permit process, for the privilege of spending upwards of $176 million. That could very well double our water bills of our customers in Virginia Beach if there was a better alternative.

I guess the point has been raised on a number of occasions, why has the process moved so fast. And if the city is guilty of anything, gentlemen, I think the city is guilty of doing its homework, of providing the facts and the information in the documentation, of attempting to do a good job.

Interbasin transfer of water is currently practiced throughout both States, and there are existing interbasins transfers of waters in and out of the Roanoke River basin by both States. It would appear that not all concerned parties are as fully informed about the interbasin transfer of water as they should be.

The city is aware of one locality that was calling for a ban on interbasin transfer of water, apparently not realizing that its entire water and sewage system constituted an interbasin transfer.

Gentlemen, I feel those are the most important points. It goes without saying that we, of course, fully support the Corps of Engineers' final finding of no significant impact and we would hopefully request that we be allowed to move ahead with the project as far as this body is concerned.

Thank you very much, Mr. Chairman.

Mr. ROE. Mayor Jones.

Mayor JONES. Mr. Chairman, my name is Louis R. Jones and I am the mayor of Virginia Beach, the largest city in the Commonwealth of Virginia. I am speaking to you today as a representative of the city council and the city of Virginia Beach.

Virginia Beach and southeast Virginia do not have a future water problem. They have a present-day water problem which will be larger in the future.

The question came up as to whether we do in fact have a sufficient water supply, be it polluted. The facts of life are we do not have a water supply, polluted or otherwise. The city of Virginia Beach does not have water available to it within its own bounds. We purchase our water from another city, the city of Norfolk, and that city has informed us that by the year 1993 they will no longer be able to provide us with sufficient water to take care of our needs.

The reason for our being here is in hopes that we will be able to convince you that we have a dire need for water for the city of Vir-

ginia Beach, and not only for the city of Virginia Beach, but the southeastern Virginia. We have a number of other cities which are participating with us in this project.

Today, all we have heard is the name of the city of Virginia Beach. We are not just talking about the city of Virginia Beach. We are also talking about the city of Chesapeake, which has a population of 110,000 people. We are also talking about the city of Franklin, Va. We are talking about a need that is not confined just to the city of Virginia Beach but the southeastern Virginia area.

The overall water needs for this area will be answered by this request that we have before the Army Corps of Engineers and which has been granted the Army Corps of Engineers.

The 1980–81 drought was a graphic demonstration that area water supplies cannot meet existing, much less future water demands.

Since 1978, my city has spent several million dollars searching for a solution to the water supply problem. We have devoted additional time and money to such exotic and unconventional alternatives as shallow groundwater, desalting, and wastewater reuse. We did this in a sincere effort to solve the problem within our own borders. Unfortunately, none of these alternatives or combination of alternatives met all the necessary minimum criteria for quantity, quality, cost, reliability, or environmental acceptability.

Gentlemen, if you have any doubt that the southeastern Virginia needs this water or that Lake Gaston is the best overall solution for the water shortage, please review the positions of the Virginia State Water Control Board, the Virginia Department of Health, the Southeastern Public Service Authority, Virginia Council on the Environment, Marine Resources Commission, and the many other responsible organizations, with excellent staffs who have recommended our approach to this serious water resource problem.

We hear a lot today about the transfer of responsibilities from the Federal to the local level. Virginia Beach and its partners in the project of local government is willing to pay upwards of $200 million to solve their own problems. We have clearly gone the extra mile to structure this project in such a manner as to minimize the impact of human and ecological environment.

We have moved the intake and pipeline route at a cost to the project of over $10 million. We have contracted with and paid the corps $2.275 million for storage in Kerr Reservoir in order to protect downstream flows in the Roanoke River. In short, we have done everything we possibly can do to reduce or eliminate the already minor impacts from this proposed project.

Mr. Chairman, I request that this committee not allow the opposition to make a political issue of the National Environmental Policy Act. Virginia Beach would not oppose the preparation of an environmental impact statement if there was one shred of believable evidence that could demonstrate significant environmental impacts from this project.

I think it is interesting that the attorney general from the State of North Carolina made the statement that if an environmental impact statement had been prepared that they would be happy to accept it. I wonder, gentlemen, do you really believe that the State of North Carolina would not challenge in court that environmental

impact statement and tie us up for an additional 18 months for the purpose of political purposes which we face today.

The truth is the maximum withdrawal of 60 million gallons per day is so small compared to the natural inflow, hydroelectric releases, and other minimum releases that go in the system, neither the Corps of Engineers nor Vepco could ever detect the loss without meters installed at the withdrawal point.

Members of the subcommittee, I know Virginia Beach can count on you and your staff not to interfere with this permit process that will allow us to continue in accordance with the laws and regulations governing such matters.

We also know that the opposition has been unable to formulate a valid technical argument to stop the project and has instead relied upon political pressure. Inflation increases the cost of this project by about $1 million per month. An environmental impact statements would not be a terribly expensive way to restate what the city's environmental report and the Norfolk District's environmental assessment have already clearly shown. That is, there is no significant impact from the proposed Lake Gaston project.

As an aside, gentlemen, an important response to one of the statements made earlier in the day, the statement was made by the Attorney General, I believe, that the State of North Carolina was spending tens of thousands of dollars of the taxpayers' money in the State of North Carolina to fight this project. When all of the technical data has been presented not only by the Army Corps of Engineers—and we understand even by their State staff—indicates there is no technical reason why this project should not go forward.

The question that comes to mind is why in the world would the attorney general of the State of North Carolina and the Governor of North Carolina spend taxpayers' money in North Carolina when the Government, all the people who have the responsibility for making this investigation have said that there is no technical reason why this project would go forward. Could it be political, gentlemen? It just might be. If it is, is it fair to spend the taxpayers' money of North Carolina for political reasons to hold up this project until next November? We all know what next November is.

Is it fair to spend the money of the taxpayers of Virginia, the citizens of Virginia Beach and the other cities that are involved in this project for political purposes and, in our case, it is up in the millions of dollars because we are talking somewhere around $900,000 to $1 million per month that this project will cost us in addition to what our current estimates are every month this project is delayed.

The other point that was brought up, I believe, by Governor Hunt was the question of why can we not wait 18 months. The question I have is why should we wait 18 months? Should the city of Virginia Beach, the citizens of North Carolina, the citizens of Virginia be held up in this process for political reasons? I say no.

Thank you very much, gentlemen.

Mr. ROE. Thank you very much.

Let me ask Mr. Watts a couple of questions.

Vepco is the Virginia Electric Power Co.?

Mr. WATTS. Yes.

Mr. ROE. What do they use that for, hydroelectric power?

Mr. WATTS. Yes.

Mr. ROE. Do they service North Carolina also?

Mr. WATTS. It is a private utility chartered in both States, and both States' customers of their system have paid for the facilities.

Mr. ROE. Let me ask you the next question.

In your discussions with the Army Corps of Engineers—and I do not know if you can answer this but I would like to know if you can—there has been no other withdrawal, to my knowledge, from Kerr Lake by any other resource agency either in North Carolina or Virginia?

Mr. WATTS. I believe the town of Clarksville withdraws directly from Kerr Lake.

Mr. ROE. Do you know how much they draw?

Mr. WATTS. No, sir. I believe it is a small amount, probably in the neighborhood of a million or so gallons a day.

Mr. ROE. When you discussed with the Corps of Engineers, you were asking for 10,000 acre feet—is that my understanding?

Mr. WATTS. Yes, sir.

Mr. ROE. When you discussed this with them, did they go into any depth with you for what they saw as a potential reserve?

I understand when the project was first built, it did not speak to water supply per se, but the general rules apply and that is what they are operating under. I will ask this of the corps in more depth later.

Did they say, well, if we operated that whole Roanoke system considering Lake Gaston, and so on, what we are trying to achieve is our basic charge of flood control, hydroelectric power, et cetera, yes, there would be a reserve for water supply?

Mr. WATTS. Yes, one set of scenarios or modeling that has been done by the Wilmington District of the corps which has the responsibility for managing the entire river system indicated there are probably 350 millions of gallons of water a day that could be safely diverted for other purposes without having a major impact on the river system.

Mr. ROE. Would you translate your acre feet against that for me?

Mr. WATTS. We are talking about 60 millions gallons a day for this project, so we are talking about a small percentage or about one-sixth of the use. In this case, it is a transfer out of the basin. Most of the other uses of the water could not end up, in fact, being out of basin transfers. The water is withdrawn. It is utilized for various public purposes, and then it is discharged back into the river system.

Mr. ROE. I am not prejudging this case. We should have put your fellows on first so we could know about the technical background.

It seems to me Kerr Lake, wherever it is located, was built for a specific purpose, built by the Federal Government for flood control, hydropower. It did not speak specifically to water supply as far as the Kerr Lake itself is concerned?

Mr. WATTS. That may be the case.

Mr. ROE. I think that is the case.

The second point is one which comes back and says, OK, Kerr Lake has an outflow that goes down through Gaston Lake which was built for power purposes and it wanders all around and back into the Roanoke River.

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What you are saying is if you have a 200-plus mile watershed area involved, that is all feeding into Kerr Lake?

Well, I guess it could not, but a good portion does.

Mr. WATTS. A major portion of the drainage basin goes into Lake Kerr and all of that dumps into Lake Gaston and some additional drainage and all of that dumps into the Roanoke Rapids such that the main flow of the river, for example, where it enters Albemarle Sound is over 6 billion gallons a day.

Mr. ROE. In the 250-mile watershed that is involved, here we have it pouring into the tributaries and into the headquarters of Lake Kerr.

Do you know how much of the watershed is involved in that facet above it?

Mr. WATTS. Above the Lake Kerr impoundment, I think it is about 8,000 acres.

Mr. LEAHY. The total drainage basin is 8,400 square miles. The drainage basin at Lake Kerr is 7,800 square miles.

Mr. ROE. What we are saying is, as far as the vitality of the Lake Kerr is concerned, one would say it is a bottleneck that goes into Lake Kerr and captures it?

Mr. WATTS. Yes.

Mr. ROE. Anything else going into Lake Kerr would diminish upon the water going into Lake Kerr if it were drawn off somewhere else?

Mr. WATTS. There are also upstream local and federally funded projects that do regulate the flow into the entire river system so they can stabilize the lake levels much better than they could 40 years ago.

Mr. ROE. When you talk to the corps—and I do not think you understood my question—here we have Lake Kerr and you are talking about a fluctuation of 2½ inches quantitative GPD that you are taking out farther down. Does that dry up all the water supply potential out of Lake Kerr?

Mr. WATTS. No, sir.

Mr. ROE. Do you understand my question?

Mr. WATTS. I think what you are trying to ask is does the 2½ inches that draw down from Lake Kerr totally preclude any future withdrawals from any other persons or entities. No, sir.

Mr. ROE. I just want to get this thought across.

If we are talking about water supply running down into a particular area and now we have captured it and we have a relationship between two States that are involved, it seems to me above and beyond the environmental impact statement, we are talking about what would be available. When the Lake Kerr process does what it is supposed to do, what residuum is left? I do not expect you to answer that or either the State of Virginia or North Carolina to draw from. It seems that part of the testimony indicated to me today that there was grave concern on the part of North Carolina about the number of points they made and also the fact that we too have water resource problems, and if we allow Virginia to take all of the water supply, that is not treating our neighbors fairly. Nobody has given us the precise facts as to what water is available there so one could come back and say the following. If these were the types of genuine concerns involved, then what is the potential

water resource for both North Carolina and the State of Virginia in view of the fact that they are sharing the watershed area and they both have mutual problems?

Mr. WATTS. Under the Federal Court doctrine of equitable apportionment, it would appear that Virginia would certainly be in a position of having some claim to a portion of the river based upon the size of the drainage basin and the flow in the river and the flow in the Virginia portion of the basin is probably more significant simply because of the terrain than the lower portion of the river which is much flatter in nature, but it would appear that Virginia would possibly have something between maybe 65 and 75 percent of the river should be allocated under equitable apportionment to the State.

The resource that we are talking about represents approximately 1.2 percent of that flow above the point where we propose our intake. We think that is fair and appropriate. It may be that North Carolina with their much more heavily industrial use of the river is getting close to the remaining 20 to 30 percent of the river that might be allocated for them. But, in any stretch of the imagination, I think that the corps has taken the posture that they have because the river system is so significantly large, the current uses, and the proposed uses of the river would indicate that we still can make this withdrawal.

I think had there been even any indication that it was even a close call, then they certainly would have made the decision to go with a full-blown environmental impact statement.

Mr. ROE. Obviously, it would be very simple for this committee to say let us go to the full impact statement. I think a major concern is about costs, and you are quite far down the road on this project. If there is an unwarranted delay period, it is going to cost the State of Virginia and the city of Virginia Beach and its partners considerably more funding until the matter is resolved. So it would be very simple to say what about the environmental impact statement if I thought that would really solve the problem. Then someone comes back and says all I am trying to get to is fairness. Everybody has helped pay for this. There is the United States interest and we are now being called upon to figure out some equitable arrangement. I have had similar battles in my own State.

Then it comes back to me and I am trying to get equitable distribution and see North Carolina and Virginia's interests protected.

I think the logical question for us to ask ourselves—and I want to amplify on this—the corps had the right and they used that right under the law to make the determination that they could withdraw quantities of water, recommended quantities of storage be sold for potable use so they did not denigrate the law's original intent. So they have obviously made that decision.

The question before the House, I would think, in both the interest of North Carolina and Virginia, would be what are the quantitative kinds of waters that are available for water supply that both States could share in? That is one question.

Then, that is, the following. Well, you have no idea—you could not answer that, I am sure.

Mr. WATTS. I can only tell you original work done by the corps would indicate some 350 million gallons a day could be diverted without detrimental impact.

Mr. ROE. To your knowledge, have there been any discussions on that level between the two respective States?

Mr. WATTS. Yes, sir, I have personally taken part in meetings between the two States where we have tried to examine every conceivable approach to dealing with some long-term solutions, and we did examine impacts on downstream river quality, on withdrawals and——

Mr. ROE. I am not asking that. I am asking a simple basic question.

If I sit there with 50,000 acre feet, why should I not give 25,000 acre feet to North Carolina and 25,000 acre feet to Virginia?

Mr. WATTS. First of all, I personally do not have any problem with that. I do not know how the rest of Virginia and North Carolina feel.

Mr. ROE. Obviously they do not agree at this moment.

Mr. WATTS. I think that is a safe statement. I think the resource is so large that, at this point in time, Virginia Beach was probably the first community that had such a significant problem that we have simply had to try to get into that.

I understand the concern for future uses and how that might divvied up between the two States.

Mr. ROE. They are in court and I do not believe the court is going to going to resolve that in 2 months either. It is a very wide area of law and everything else involved. That is one factor. The mayor brought that point up. We say, OK, do the environmental impact statement. We know that is not the issue. We could do that and we are stuck in court and somebody makes a decision in court and God knows what would happen at that point. It may be the timeframe the Mayor spoke to is there, and that is what it will cost you to fund the project.

Then we come back and ask what is the fundamental issue? It is the equitable sharing of the water resources for the interests of both the respective States plus two other major points.

One, if the drawdowns are made in a proper manner, it does not denigrate use for recreational purposes and so on, which is a legitimate and understandable point.

Now, we have two brothers trying to whack up fair play for both the respective States that the people of the United States paid for, not the people just in North Carolina or Virginia. It is a set of facts.

Mr. WATTS. I am not aware of any data that would indicate precisely what that amount of water should be.

Mr. ROE. I think we should find that out because that is a key issue.

Mr. WATTS. Yes, sir.

Mr. ROE. Are there any other questions?

The gentleman from Minnesota.

Mr. STANGELAND. Did I understand you to say Kerr Lake has a capacity of 900 billion gallons?

Mr. WATTS. That is full capacity of the lake, but it is not only maintained there. The normal level they try to maintain would be

a storage capacity of about 385 billion gallons, the remaining balance being for flood storage purposes.

Mr. ROE. That is the management decision.

The question is, Is there a greater capability of storage there than has been referred to?

Mr. WATTS. One of the approaches that could be considered, for example, would be if the corps based on the data which they have now after many years of operating the river and having their management experience with it, would simply raise the level that they would normally maintain the flood pool at—for example, if they raised it a few inches over what it is currently, it may end up with no impact at all to anyone in Virginia or North Carolina. The corps has indicated in the past, and I think particularly what happened to some of the Bureau of Reclamation projects, and in the management of some of those, they took those decisions extremely seriously, recognized that when you start getting into that flood control pool level, that they get a little concerned about their ability to manage everything, given bad blood, and that was the initial purpose for the project.

They have not indicated a willingness to modify it yet. They have in the past for some other environmental issues such as the striped bass spawning and they have also done it as a direct result of North Carolina having some recreational needs. That may be a scenario that would eliminate both States' concern.

The problem Virginia Beach has is we are not in a position to shut down and negotiate with another State or deal with some of the Federal issues.

Mr. ROE. What I am thinking about is a lot of our good citizens and those who represent us from both sides of the aisle come before us, and this is the second tough one this week, which is almost insoluble unless people are willing to look to the true motivations and true concerns.

We have had some projects in the country where we decided that we had to top those dams and do things that altered the flow, altered the management and created a more dependable water supply. That is not impossible to do.

Mr. WATTS. Mr. Chairman, this problem is solvable. There are ways of working together to meet the original needs expressed by the communities and not have a detrimental impact.

Mr. ROE. I thoroughly agree with you.

That is what we are here for.

In order to make those particular determinations, we have to isolate what people's true motivations are. I am not impugning anyone's motivations. I happen to be technically trained so I am looking at this as a journeyman's problem.

Out of all the testimony today, I am not predetermining the case, the diversion of a share going to North Carolina should be the same fair share going to Virginia. The solution does not lie in artificial delay anymore than just having an arbitrary decision made. We had two Governors. We have been serious all morning.

Although this is a very popular committee, when do you have the Governors and Senators from two States doing combat and jousting along with the Governor and Representatives from other States?

Obviously, the brothers and sisters in North Carolina are distressed, and maybe we are all seeing the forest but not the trees.

Mr. WATTS. Mr. Chairman, my perception is in spite of all the statements that have been made, that the people of Virginia and North Carolina have a right to expect that the river system would be managed responsibly and that the resources shared between the two States under some appropriate basis without any detrimental impacts in Virginia or Carolina.

I think that the concerns of Carolina primarily relate to this first significant withdrawal from the standpoint of the numbers of gallons compared with others, and what might happen in the future or to future generations.

They are legitimate concerns. Virginia has very similar concerns, also. They do not want to mortgage the future generations in Virginia by not being able to deal with some economic or very valid health or safety issues just because we make some decisions now that are not in the long-term interest of everybody.

Virginia Beach also recognizes water resource management problems better than any community in either study. On more than one occasion, I asked the officials in North Carolina what they would ask me to do if I were a utility director in Raleigh or Durham, and they said to do precisely what you are doing. Get out as many facts as you can, and by State compacts and other long-term arrangements between States, simply take a long time. We have tried to do that. We have spent over 2 years in meeting with and trying to deal with legitimate issues between the two States.

We cannot wait any longer.

Mr. ROE. You do not have to replead your case. I understand that. I am looking at the technical facts. I have taken too much time already.

The gentleman from Minnesota.

Mr. STANGELAND. I was trying to determine the holding capacity of Kerr Lake and the level it is normally held at to allow for that additional flood control protection throughout the season. We talked about a draw down of as much as 17 feet.

Mr. WATTS. Since the reservoir has been completed, there were periods of time there where the draw downs were between 17 and 22 feet.

In the early 1970's, the corps changed the operating rule primarily to meet the needs of Virginia and North Carolina communities. Since that period of time, they have regulated the river and lake levels much more accurately, and the fluctuations have been significantly less, and I would think that seven feet is probably appropriate.

Mr. STANGELAND. To your knowledge, since Kerr Lake was put in and Gaston Lake and the other Roanoke dam, has there been a constant minimum flow in the Roanoke River adequate to not cause any environmental damage?

Mr. WATTS. Obviously, the demands of the river changed during certain periods of the year. There are minimum release requirements which are spelled out in all the permits and all of those minimum release requirements, to the best of my knowledge, have been met and all of the modeling which we did and came up with

the figures, indicated that we would continue to meet all of those requirements.

There have been certain times during droughts when they have tried to keep the river at almost flood stage during the spawning season. There have been certain times when maybe they did not get the full 50 days they were looking for, but they did make the significant releases during those periods of time when the Fish and Wildlife indicated it was significant and desirable.

Mr. STANGELAND. I have one last request of this panel, and then perhaps Mr. Watts.

Congressman Valentine and Congressman Edgar inserted a letter, and I would like to make that letter available to you and I would like to have a written comment from you on that.

I will do some investigating on that as to why it went to Governor Hunt, and to the higher ups in the Interior Department.

Mr. WATTS. It may be in examining that letter that the Fish and Wildlife people had realized we opted for reallocation and, as a result of that, we would guarantee all of the minimum downstream flow requirements.

We did meet with the Fish and Wildlife people. They had ample opportunity to review the project, and they indicated to us they did not have any major problems with the approach that we had recommended.

Mr. STANGELAND. Thank you.

Mr. ROE. Mayor, you are getting your water supply from where?

Mayor JONES. The city of Norfolk.

Mr. ROE. Where do they get their water supply?

Mr. WATTS. The Nottoway and the Blackwater Rivers which are much smaller rivers.

Mr. ROE. Are they located below the Kerr Lake Dam?

Mr. WATTS. They are located a good deal west of the Kerr Lake Dam, about 70 miles.

It is an entirely different system altogether.

Mr. ROE. So, they are not part of that watershed?

Mayor JONES. They are, for the most part, ground water available, the only available water that is available for our area, and we have been informed, as I have already stated, that we will not be able to count on that. Our contract with the city of Norfolk right now spells out very specifically they will sell us only that water that they consider to be surplus water.

So, anytime they decide they do not have any surplus water, we don't have any water.

Mr. ROE. They are cutting you off because they are looking for growth of their community, or what?

Mayor JONES. Basically, they are telling us they expect growth in their community and they don't want to commit their water to us. That is what they are telling us.

Mr. ROE. Mr. Valentine.

Mr. VALENTINE. Thank you, Mr. Chairman.

Very briefly, I would ask this question of all of you.

I am sure you do not have any objection to environmental impact statement because you made one yourself and presented it to the corps.

Do you see any difference in a study of the impact made by Virginia Beach as an interested party and a study made by the Corps of Engineers which is supposed to be impartial?

Mr. WATTS. Congressman Valentine, obviously we have looked to the Corps of Engineers from the beginning on this to fulfill a third-party impartial evaluator role for the Federal Government, looking to protect all of the U.S. citizens' interests.

The process has not been easy. They have done an awful lot in the way of questioning everything that we submitted to them. We think that there is a very important purpose for that role, and we think that that is the reason that Congress enacted the laws that they did.

We did try to responsibly respond to all of their requests.

Mr. VALENTINE. I do not question that a bit, and I do not question that you did the best you could. But, in all fairness, do you not see a difference at least in the minds of the other people involved, whether the environmental impact study was made by the Corps of Engineers which is supposed to be looking out for everybody's interests, or whether it was made by one of the parties?

Mr. WATTS. I certainly concur with what you are saying.

Mr. VALENTINE. Did you recommend to the Corps of Engineers—go ahead, I am sorry, I know the questions have been raised, except what they said at face value, and go ahead and make an environmental impact statement?

Mr. WATTS. Mr. Valentine, the decision as to whether or not an impact statement or an assessment was prepared was solely the decision of the Corps of Engineers and Virginia Beach consistent, in fact, with their scoping meeting with the corps initially, when we talked with them, and we asked what type of document they are looking for, what type of information, and to what degree do we need to prepare things, and can you identify any particular important environmental issue that we need to provide additional information on.

We certainly volunteered to the Fish and Wildlife Service and other Federal agencies that we would do certain studies if they felt they were necessary.

Mr. VALENTINE. Do you not see a difference between your doing the study and them doing the study?

Mr. WATTS. I absolutely see a difference, and I believe it is the responsibility of the corps to prepare a document that meets the needs of the citizens of the United States and not just the citizens of Virginia Beach.

Mr. VALENTINE. Do you not think that has the name of environmental impact statement?

Mr. WATTS. Only if there is a significant environmental issue that needs to be dealt with.

Mayor JONES. I think it should be noted, Congressman Valentine, that the impact report that came from your Department of Natural Resources estimated a lower impact on the environment than did the report that we submitted to the Army Corps of Engineers.

So, in effect, your State people have said to the corps that the impact is less than we even told them it would be.

Mr. VALENTINE. It would seem to me that would give you more sense of security in what the corps would come up with.

If that is the case, that is all we have ever said. If that is the case, why would not the Corps of Engineers——

Mayor JONES. It would also point out the lack of need for going any further with the full-blown environmental impact statement.

Mr. VALENTINE. I agree maybe we expect too much of an environmental impact statement, and I think it was implicit in my statement. I think what we need to have done and I hope sooner rather than later, is a study of the needs of both sides. That is what I was talking about when I asked, did the corps consider the impact on this project on industries on down into the Roanoke River basin.

Have they considered what all the future needs are?

This is kind of like the camel putting his noes under the tent. You have people standing in the wings in Richmond, and all the other cities, Greensboro and High Point, for instance, and I think that is what we are saying when we ask them to make an environmental impact study to cover all of these things.

Thank you.

Mr. ROE. Speaking for myself, and I do not want to belabor this, what this committee ought to note, what the reserve potential is in Kerr Lake and how that relates to the two respective States.

It seems to me if each one has their fair equitable share and that could be guaranteed by legislation, maybe that is the solution we are looking for.

Thank you very much, gentlemen.

Our next witness is Mr. Robert Sutton, chairman of the board of the Greater Hampton Roads Chamber of Commerce.

May I suggest that after Mr. Sutton presents his testimony, there are two major panels left for discussion. If you can indulge me and let me make this point to you, there is no point in rehashing all that we have listened to this morning.

I will let everybody talk if it takes all night. In view of the testimony today that we have all been privileged to listen to—and I am sure we have pros and cons involved in our own thought processes—when we call up our other panels, rather than reading your whole testimony, it would be helpful if you would highlight certain specific points that have either been missed or points which you want to amplify. This would be valuable to the committee rather than going through a drill, if you do not mind my saying that.

Now, we will hear from our next witness, Mr. Sutton.

TESTIMONY OF ROBERT SUTTON, CHAIRMAN OF THE BOARD, HAMPTON ROADS CHAMBER OF COMMERCE

Mr. SUTTON. Mr. Chairman, distinguished members, my name is Robert Sutton. I am chairman of the board of the Hampton Roads Chamber of Commerce. As such, I represent over 6,000 business, professional, and educational members from the south Hampton Roads region. It is a pleasure to be here today to discuss with you the importance of insuring an adequate water supply for the Hampton Roads area.

I am here to impress upon you the importance of allowing the plans to proceed to build the water supply pipeline from Lake Gaston to the Hampton Roads area.

There has been a great deal of political controversy generated but it seems that there is very little substantive reason to delay the pipeline further. I am confident that as a result of this hearing you will agree that the best course of action is to proceed immediately with plans to build the pipeline.

The pipeline will serve to alleviate problems in the entire south Hampton Roads area which is comprised of the cities of Virginia Beach, Norfolk, Chesapeake, Portsmouth, and Suffolk, Va.

Virginia Beach currently relies on Norfolk for its water supply. If any of you happened to be in the Virginia area in 1977 or 1980, you would remember the water rationing measures we had to impose. Clearly this is not just a problem for the future; any further delay could have a serious impact today.

Let me give you more details about the Hampton Roads area and its water supply.

CURRENT WATER SUPPLY IS FAILING

Virginia Beach currently furnishes its resident water customers with 23 million gallons of water per day on an annual average basis, and is expected to need 48 million gallons per day by 2030.

By building the pipeline, Virginia Beach and Chesapeake will no longer have to depend upon Norfolk for their water, thus lessening the demand on Norfolk's water supply. Serious droughts in southeastern Virginia in 1977 and 1980 exposed the inability of the Norfolk water system to serve its existing customers—including Virginia Beach—and demonstrated the need for a major source of additional water supply to Virginia Beach and other cities in the Hampton Roads area.

PROJECT DESCRIPTION

The project involves construction of a water intake structure in the Pea Hill Creek arm of Lake Gaston in Brunswick County, Va., and a pipeline approximately 84.5 miles from Pea Hill Creek to connect with a city of Norfolk water pipeline. From Pea Hill Creek, the pipeline would proceed to a Virginia Electric Power Co. powerline right-of-way, along a Norfolk & Western rail line to the town of Walters, in Isle of Wight County, and along the city of Norfolk aqueduct easement and Virginia State highway right-of-way to Red Top. The project will be located entirely in Virginia.

In this time of substantial Federal deficits I want to highlight the fact that there will be no cost to the Federal Government. In fact, Virginia Beach will not only pay a fair price for the water it uses; it will pay for a proportionate share of the capital costs of the Kerr Dam and Buggs Island Reservoir, just as if Virginia Beach had been an original project participant.

REGIONAL AND NATIONAL IMPLICATIONS

The importance of the Hampton Roads water supply extends far beyond mere local interest for several reasons.

First, Hampton Roads is one of the largest ports on the east coast. A substantial portion of our Nation's commercial exports flow through this port.

Second, the Norfolk Naval Base is said to be the biggest in the world. Military and related population represent 60 percent of the Tidewater area's population—including over 119,000 military personnel, almost 54,000 civilian heads of households, who work on the base, and 273,500 dependents.

The lack of an adequate water supply creates serious adverse effects on this segment of our population so vital to the Nation's defense. Additionally there could be possible adverse impacts on the effective functioning of the installations themselves.

Third, Hampton Roads officially became a single statistical area in June 1983—making it the 34th largest metropolitan area in the United States and the largest business center between Washington and Atlanta. As a metropolitan statistical area the Hampton Roads area joins the ranks of major national cities. Basic needs, such as water, are critical to the support of such a large and growing population.

THERE IS NO NEED TO DO A FULL EIS

The Army Corps of Engineers did a full environmental assessment study of the pipeline, including all possible effects on navigation, flood management, hydrology, water quality, fish and wildlife, soil and minerals, and others; plus full and comprehensive review of all possible alternatives. The chief environmental concerns examined were:

First, would the drawdown of up to 60 million gallons per day create a significant environmental impact?

And, second, would the actual construction of the pipeline significantly harm the environment?

In both cases, after careful study the conclusion was reached that there would be no significant environmental impact. The Norfolk District Office then issued a "Finding of No Significant Impact."

Let me give you a few facts and figures: 60 million gallons a day may sound like a great deal of water. It is, but not relative to the size of the Kerr-Buggs Island Reservoir. In fact, it is less than half a percent of the reservoir's capacity of 738 billion gallons of water. Under normal conditions there is a surplus of at least 350 million gallons per day available for use after all downstream flow release requirements are fulfilled. The Wilmington District Corps of Engineers, the city of Virginia Beach, and the State of North Carolina have all modeled the impacts of a 60-million-gallons-per-day drawdown from the reservoir. All three studies concluded there would not be a significant impact.

Let me give you some perspective: During a period of record low stream flow—a situation expected to occur less than once in 100 years—water levels without this project would be drawn down 7 feet below the normal 300-foot elevation. With the project, water levels would be 3 inches lower.

Compare this to the potentially significant negative impact of continued drawing down of existing aquifers through the deep wells as described in the Corps' Environmental Assessment.

Several studies have pointed out that principal ground water aquifers are presently at or exceeding their maximum withdrawal rate. North Carolina has expressed concern over existing ground water withdrawals in Virginia, contending that they

already adversely affect North Carolina ground water. If more ground water were to be withdrawn some existing wells would begin to go dry.

Thus a delay in constructing the pipeline could actually have a serious negative environmental effect on North Carolina's ground water.

The actual construction of the pipeline will have minimal environmental impact. The pipeline will be constructed using existing powerline and railroad rights of way.

The construction will involve a number of stream and river crossings which will be made within an existing railroad grade, on existing, but abandoned, railroad bridge pilings, or buried.

The corps' environmental assessment found that both during and after construction there would be minimal if any impact on the environment. Let me emphasize that the corps studied dozens of potential impacts. In every case, the corps found there was no significant impact.

I believe that if you will examine the corps' environmental assessment, you will find it thoroughly and carefully done.

CONCLUSION

In conclusion, I am convinced that once you have heard the full story from all witnesses today, you will agree that the need for the pipeline project is vital, and that its construction should proceed without further delay, that all alternatives have been exhaustively examined and that no additional study is in order.

The water supply needs of the Hampton Roads area have been studied for 10 years. The Army Corps of Engineers and the city of Virginia Beach have exhaustively considered every available alternative and held numerous public hearings. The inescapable conclusion is that the best overall alternative is the pipeline.

The corps has recently issued a permit to allow construction to begin. It is now time to get on with the job.

Thank you very much for your attentive consideration.

If you have any questions, I will be pleased to answer them.

Mr. ROE. On page 5 of your testimony in the middle paragraph, you allude to the ground water aquifer situation, and you say:

> North Carolina has expressed concern over existing ground water withdrawals in Virginia, contending that they already adversely affect North Carolina ground water.

Where did that come from? Do we have writing or documentation that comes in from North Carolina on that issue?

Mr. SUTTON. I do not know on what basis the corps made the statement.

Mr. ROE. That particular statement is to the corps' statement?

Mayor JONES. Mr. Chairman, there have been a number of meetings of committees made up of representatives of both the State of Virginia and the State of North Carolina, and repeatedly in the meetings, the water resource problems were addressed and, repeatedly in these meetings, the question comes up as to the concerns of northeastern North Carolina concerning the depletion of their ground water levels as a result of ground water being used in the State of Virginia.

Mr. ROE. How much of the water supply in the Hampton Roads area is ground water?

Mayor JONES. I will try to get you the answer to that.

Mr. SUTTON. To give you some general background, it became apparent in the last drought when the Norfolk area was unable to meet the needs and deep wells were drilled in the western part of the region to try to alleviate some of the problem, it became obvious then it was having an adverse effect on the aquifer.

Mr. ROE. That is a very important issue.

Are there any questions?

Mr. VALENTINE. I do not have any questions, Mr. Chairman.

Mr. ROE. Mr. Watts, we were just discussing two issues, one apparently in the Corps of Engineers' report. It came from some place. We would like to look to the authority if you have any knowledge on it having to do with the reference in Mr. Sutton's statement to "North Carolina has expressed concern over existing ground water withdrawals in Virginia, contending that they adversely affect North Carolina ground water."

Mr. Sutton proposed why not use some of the inland waterways resources rather than depleting the ground water. Do you have any idea where that statement came from?

Mr. WATTS. Mr. Chairman, there has been a significant evaluation and examination of the ground water resources available in southeastern Virginia and northeastern North Carolina. There is a bi-State committee working on it, and there has been USGS modeling.

Mr. ROE. Have any reports been given on it?

Mr. WATTS. There are some reports officially released and there is a lot of other technical data which has been discussed and evaluated within the bi-State group. I think the bottom line of all of that is that the aquifer is currently at a point of equilibrium or slight overdraft, and I think it was the opinion of people on both sides of the State line that ground water should not be relied upon as a long-term solution.

We are also aware of the fact that the salt level is being raised.

Mr. ROE. So you have a saline intrusion, and so on?

Mr. WATTS. Yes, sir.

Mr. ROE. That is an ongoing negotiation between both States?

Mr. WATTS. Yes.

Mr. ROE. Would you supplement your testimony and give us that summary of that data, if you can get it. I do not mean volume after volume after volume. Is there some official agency working this out or is there a committee?

Mr. SUTTON. There were committees appointed by both Governors, and I think there is printed data from that committee which we would be more than glad to provide to the committee.

Mr. ROE. When we were discussing with the mayor the withdrawal of a water supply for the city of Norfolk, apparently they are not drawing from the same river basin area. It is drawing from another one.

In the case of Virginia, how many river basins are involved? Are there only two?

Mr. WATTS. There are some six major river systems within the State. Obviously the James River basin, the Rappahanock, the

Chowan River in North Carolina, but that includes Meherrin, Blackwater, and Nottoway Rivers.

Mr. ROE. If the water supply lessens in the Norfolk area which serves that basin, is that in trouble? Obviously, they must be.

Mr. WATTS. The city of Norfolk is currently relying on some ground water withdrawals plus the city of Portsmouth, and it would appear that the safe yield of those systems is not sufficient to meet the needs, and that was pretty well proven out in the 1980-81 drought.

Mr. ROE. You can give us a second document speaking to your supplier, the city of Norfolk receiving its supply from this other water basin and the latest reports involved that river basin which is now depending on safe yield.

Mr. WATTS. In the opinion of both North Carolina and Virginia, that is 100 percent allocated, and their major concerns are——

Mr. ROE. Does that basin affect North Carolina, too?

Mr. WATTS. Yes, sir.

Mr. ROE. It is a statement based on fact. What we are coming back and saying is the dilemma that Norfolk, and so forth, is facing, that spills over to Virginia, Virginia Beach is based upon the point that it is not fair. Somebody has to do something about whether it is this issue or any other issue.

There is not a water supply available to meet the water supply for the people in that region and the groundwater existing between the two States has an effect upon the two States and also the river basin that serves Virginia Beach no longer has allocable water, and you have to go outside of the area to get water.

There are people from all over the country who are trying to understand something you have worked on for 20 years.

You make an excellent witness. Never mind all of the other reports people gave.

After we go around chasing ourselves, those are the facts, and we have to say no, North Carolina and Virginia, your groundwater is affected so what do you want us to do? We cannot get it any place. Let us get together and do something that is equitable and fair. That is a fair statement to make.

They said on the testimony we received today, and that might be part of the Solomon solution that has to be decided. There is no sense in fighting over something. Why not share it?

Mr. WATTS. I concur with your analysis and approach. I think there is one other thing I need to clarify.

Earlier, you asked questions about what could be safely divided between the two States.

Mr. ROE. I do not think I used the word "safely." What could be divided equitably?

Mr. WATTS. What I need to indicate to you is given the worst case scenario of droughts and still meeting all of the environmental downstream requirements, 350 million gallons a day could be divided between two States.

The real problem, Mr. Chairman, I think, has been whether Virginia should get 60 or 40 or 70 or just how that division should be made.

Mr. ROE. Can we play Solomon? You were talking about equitable distribution factors. You could take whatever related to the two

States, the people could fight over the residual but let us get the equitable distribution made now.

My daddy told me half of nothing is nothing.

Thank you very much.

The next panel will consist of Mr. Joe Parker, Mr. Travis Tomlinson, Mr. Patrick McSweeney, Mr. J. D. Everett, Mr. Walter J. Harris, and Mr. Victor Denton.

I would start with Mr. Parker and ask, if you can, summarize your testimony so that we will have a chance to exchange views with you. As they say in my State, we do not have to chew the cabbage twice.

The full text of your prepared statements will appear in the record at this point.

[Statements referred to follows:]

TESTIMONY OF TRAVIS H. TOMLINSON

Mr. Chairman, ladies and gentlemen, my name is Travis H. Tomlinson (2320 Churchill Road, Raleigh, N.C., 27608). I speak as president of the Kerr-Buggs Island Lake Protective Association. This association represents approximately 1500 families from North Carolina and Virginia, who own property around the lake, use it extensively, or otherwise have been abiding interest in its well being. The organization has been in existence since the dam was built and has been very active in preserving the lake's quality and public benefit.

We attended the Lawrenceville, Virginia and Roanoke Rapids, N.C. public hearings on August 25 and November 14, 1983, and made oral and written presentations. In addition, we have had numerous meetings, long discussions, and have filed written comments with all key parties.

Needless to say, our members are upset. The Kerr-Buggs Island Lake Protective Association is opposed to the city of Virginia Beach's proposal to withdraw up to 60 million gallons of water per day from Lake Gaston because water pumped from Lake Gaston comes from Kerr Reservoir. When the U.S. Congress approved this reservoir, the purpose was threefold: (1) flood control, (2) the creation of electricity, and (3) downstream augmentation. It would appear that to change the purpose of Kerr Reservoir, to include storage for drinking water, would require congressional action.

The decision not to have a complete environmental impact statement is beyond my comprehension.

(1) The corps, to date, has ignored the serious injury to Kerr Lake that is likely to occur due to further reductions in its water level. Virginia Beach itself estimates that the drawdown might be increased by as much as 1.2 feet as a result of a withdrawal of 60 MGD from Lake Gaston. Considering the low water levels experienced over the past 11 years, water-based recreational facilities would certainly be jeopardized by any additional drawdown.

(2) In 1982, many million visitors used the recreational facilities of Kerr Lake. The economic impact on local service businesses of this amount of tourism is quite sizeable. A relatively small decrease in the lake level at Kerr Lake has a critical impact upon the use of boating facilities operated by the Government and by private interests. During the summer season, the corps has set a target elevation of 299.5 feet for Kerr Lake water levels to insure full enjoyment of the recreational facilities. The target elevation declines to 295.5 feet in the fall and winter months. This level is also considered the minimum lake level acceptable to the corps year round.

(3) While an elevation of 295.5 feet is the desired minimum water level, in eight of the past 11 years, this level has not been maintained. In three of the past 11 years, the water level has been below 293 feet.

Water levels are critical for those using lake facilities. As an example, I quote from testimony by the State of North Carolina presented to the corps hearing on November 14, 1983. "when the water level at Kerr Lake drops to 295 feet, only seven of the 16 boat ramps operated by the State of North Carolina can be used for all types of watercraft. Five of the ramps can be used only by small boats, and the remaining ramps are only marginally usable. When the water level is lowered to 294 feet, only six of the 16 ramps can be used by all boats, one other ramp can be used only by small boats, and the remaining nine ramps are, at best, marginally

operable. At a water level of 293 feet, the nine marginally operable ramps become essentially inoperable."

Ramps in other areas of North Carolina and Virginia will suffer in about the same percentages.

(4) Lowered lake levels at Kerr Lake not only restrict use of ramps but also present a serious hazard to boaters, swimmers, and water skiers on the lake. At a lake level of 295 feet or lower, sandy shoals are exposed, and swimming and beach use become impractical in many areas due to the exposure of a 100 foot wide barrier of sticky muck between the normal shoreline and the water's edge.

The property owners and visitors to Kerr Lake are concerned and their apprehension is multiplied by the corps absence of the (EIS) the precedent here is staggering. If Virginia Beach can take water from our Lake, who is next and how many will follow.

If one man can make a decision effecting so many people without regard for the unknown consequences and then decide for himself that "no significant effects are anticipated", somebody needs to make an in depth study. This is why we feel an (EIS) is essential.

STATEMENT OF PATRICK M. MCSWEENEY ON BEHALF OF THE ROANOKE RIVER BASIN ASSOCIATION

I appreciate the opportunity to present the views of the Roanoke River Basin Assocation on H.R. 4317, which would require preparation of an environmental impact statement in connection with the proposed pipeline to be constructed by the City of Virginia Beach from Lake Gaston to Suffolk, Virginia.

My name is Patrick M. McSweeney. I have served as its legal counsel since 1978 and am representing the Association here today at the request of its Chairman.

The Roanoke River Basin Association is a broadly-based membership organization which has continuously and persistently advocated the interests of the people of the Roanoke River Basin since the Association was founded in 1945. It is a private, nonprofit organization drawing its members from individuals, business entities, civic organizations and local governments on both sides of the Virginia-North Carolina line.

The long-term significance of the proposed pipeline is something that the Association and many other groups believe has been ignored by the Corps of Engineers. The effect of this project on the future development, environment and economic well-being of the Basin has not been adequately considered in the process of deciding whether the project should go forward.

Equally important is the absence to date of any consideration of the impact of supplying additional water to the South Hampton Roads area. The additional supply of water to South Hampton Roads to be provided by this pipeline will inevitably yield a corresponding amount of wastewater. This poses a problem of further pollution of the Elizabeth River, the Lower James River, Hampton Roads, the Lower Chesapeake Bay and the Atlantic Ocean at Virginia Beach. An analysis of this problem should be undertaken.

In spite of these criticisms of the City of Virginia Beach and of the Corps, the Association has not been negative in its approach to the water shortage in Virginia Beach. We have developed and proposed a number of approaches to help solve the problem. Our principal suggestion has been a project to provide enhanced treatment and indirect reuse of wastewater in the South Hampton Roads area. This is neither a new nor an untested method of supplying potable water.

It is not our intention to reargue the points addressed to the Corps of Engineers. Our hope is that overriding policy considerations, which we will address to you, compel the conclusion that a thorough study of the socio-economic and environmental effects of such a pipeline must be conducted before construction begins.

Let me posit the major propositions we wish to offer before elaborating on them:

1. If Virginia Beach can divert large quantitites of water, surely many others will expect to do likewise.

2. The water to be taken by Virginia Beach deprives the Basin of its "growth increment."

3. The choice of a remote water source rather than the supply that could be found within the South Hampton Roads area simply postpones the inevitable.

4. The perception that Virginia Beach residents overwhelmingly favor this pipeline may not be accurate.

5. The federal decision to approve the pipeline is at odds with the federal initiatives to clean up the Chesapeake Bay.

6. The proposed pipeline is an overly-expensive alternative.

1. A DANGEROUS-PRECEDENT

If the water shortages forseen by Virginia Beach can be cured by going inland to take from another region water which the latter considers crucial to its future economic health, is this same course to be denied other cities facing shortages? The Corps has argued that its decision was necessarily ad hoc and that it will address each proposal as it arises. That position is indefensible and amounts to an abdication of federal responsibility.

In 1969, Congress enacted the National Environmental Policy Act in part to get away from this incrementalism—this ad hoc appoach to making decisions. Obviously, it has not changed the way the Corps makes its decisions.

Now is the time to formulate a coherent federal policy regarding urban water shortages. No one seriously argues that the approach involved in this pipeline project provides an answer to the long-term needs of this country's water-short areas, especially in heavily-developed coastal areas. What justification is there for postponing the formulation of such a policy? Would it be fair for the Corps to approve the Virginia Beach diversion, but turn down similar requests by other cities in the near future?

Without doubt, this interbasin diversion will be cited as a precedent. In the Roanoke River Basin alone, there are a number of additional diversions threatened by cities other than Virginia Beach. The Corps refused to consider the cumulative effect of these withdrawals. Yet we already have the unfortunate histories of Florida Bay, the Delaware River Basin, Mono Lake, and the Colorado River to demonstrate the folly of large interbasin diversions.

Someone must provide leadership. Someone must take a broader and deeper look at the overall problem and at the reasonable alternatives to this diversion approach. The Virginia Beach problem is an excellent place to start. It won't start unless the Corps is required to undertake the appropriate, detailed study.

2. THE "GROWTH INCREMENT"

The City of Virginia Beach and the Corps of Engineers have argued that the diversion of as much as 60 million gallons of water per day from Lake Gaston will not create environmental harm. The Association does not accept that position. Even if it is true, it ignores the fact that such withdrawals will eliminate what the communities of the Basin consider to be their "growth increment."

The Basin is an underdeveloped region seriously in need of new industry to insure any economic progress. Without abundant water supply, its economic growth will be severely stunted. Even a change in the image of the Basin as a water-rich region will have a profound, adverse effect on its future.

3. POSTPONING THE INEVITABLE

The lazy solution to the looming water shortages in the South Hampton Roads area is to reach out to a remote, but politically weaker region for a convenient source of water. A disciplined approach would have involved a more serious consideration of alternatives within the South Hampton Roads area itself.

Sooner or later, many, if not all, heavily-developed coastal areas will be forced to confront the need to solve their water supply problems within the limits of their own resources. Reaching for more and more water from farther and farther away is obviously not a satisfactory solution. Water reuse, conservation and other new methods will become commonplace.

There is a federal role in advocating a responsible course in water resources planning. A better example of the urgent need for federal leadership could hardly be imagined than the situation presented here, particularly with the State of North Carolina already in court challenging a proposal of a Virginia locality.

Several examples of water reuse projects can be found in various areas around the United States. In Orange County, California, for example, Water Factory 21 treats wastewater to advanced levels and uses the treated product to recharge ground-water for eventual potable use. In nearby Fairfax County, Virginia, the Occoquan Reservoir, which provides drinking water to more than 600,000 people, receives as much as 90% of its daily input at certain times of the year from the Upper Occoquan Sewage Authority's advance wastewater treatment plant.

Such an alternative was never given serious consideration by the Corps in this instance because of its reliance on the value judgment of the Virginia Department of Health that water reuse was among the least desirable alternatives. That position, unsupported by fact, was prompted by the Department's policy that the highest quality source of water should always be selected even if a great distance away.

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Such a policy is contentious and unworkable. It would mean, for example, that every city within 100 miles of Lake Gaston should use it as a water supply because of its superior quality.

Clearly, the federal government should participate in, or even lead, the development of water resources policies of this kind. Enactment of legislation requiring an environmental impact statement for the Virginia Beach project would be a step in that direction.

4. RATEPAYER SUPPORT IN VIRGINIA BEACH UNCLEAR

We believe that many political figures in Virginia have been influenced by the implicit suggestion by Virginia Beach proponents that the ratepayers who must pay the tab for this expensive project are overwhelmingly supportive. From firsthand experience, I question whether that assumption is correct.

The residents of Virginia Beach already pay a relatively steep price for water and sewer. If a projection of the increases in rates and a comparative study of rates in other parts of Virginia and the rest of the country were made known to the Virginia Beach ratepayers, I am confident that the number of opponents would grow.

I have discussed this project with Virginia Beach ratepayers who are puzzled that the City would refuse to take a closer look at an alternative that might save them tens of millions of dollars. Such a study would be one of the principal advantages I would see in the preparation of an environmental impact statement.

In addition, I think that it is unfair to assume that Virginia Beach residents are so eager to obtain an additional water supply that they would want to ignore the opportunity to clean up part of the Chesapeake Bay and its tributaries while simultaneously providing sufficient drinking water to meet their needs. These folks are aware of the problems in the Bay. They are directly affected by many of those pollution problems. They also realize that part of their tax dollar is going to clean up the Bay. It makes little sense to some of them that the Corps has approved a project that will indirectly add to the pollution.

5. INCONSISTENT FEDERAL ACTIONS

In the very month in which the Corps approved the pipeline, President Reagan proposed to spend tens of millions of dollars on a Chesapeake Bay clean-up. This follows tens of millions of federal dollars already spent on studying the problem.

There is simply no way to treat as coherent a federal policy not only encouraging but ultimately perhaps mandating reduction in the amount of pollution going into the Bay and its tributaries from publicly-owned treatment plants in South Hampton Roads, while simultaneously permitting an inevitable increase in the amount of pollution being contributed by these plants. The selection by the Corps of the City's preferred alternative without more serious examination of alternatives that would implement Chesapeake Bay clean-up initiatives was inexcusable.

6. THE CHEAPER AND BETTER WAY

We have suggested, based upon our analyses, that an indirect reuse alternative not only would contribute to an important reduction in pollution to the Bay, but also would solve the water supply problem with roughly $100 million less in capital investment. Our suggestion was discarded by the Corps in a brief reference to an April 29, 1983 letter from the Virginia Department of Health. No study was ever undertaken by the State Health Department. The indirect reuse alternative was rejected by that agency on the basis of its policy that the "purer" source should always be chosen. There is no factual support for the agency's conclusory statement that effluent from an advanced wastewater facility in South Hampton Roads would degrade the impoundment to which it would be pumped.

Certainly, with the prospect of saving $100 million and helping to clean up the Bay as ingredients, the Association's suggested alternative deserved more thorough study. It's not too late for such a study.

The policy implication of any alternative that would address the water shortages in Virginia Beach are important enough to require a thorough analysis of the overall problem before a specific solution is implemented. The choice made is certain to have consequences far beyond the Roanoke River Basin and Virginia Beach. For that reason, the Association strongly urges enactment of H.R. 4317 in amended form.

An amendment to H.R. 4317 was necessitated by the precipitous action of the Corps on January 9 in issuing the permit to Virginia Beach in spite of this pending legislation and on the very next working day after receiving comments on its envi-

ronmental assessment. Regardless of the Corps' action, that agency should be required to go forward with an environmental impact statement. The value of preparing such a document is that the very exercise of preparation may force a broader perspective on the Corps or at least produce a report which Congress can use in formulating a much needed federal policy in water resources planning.

We suggest that H.R. 4317 might be amended to read:

Notwithstanding any other provision of law, the Secretary of the Army shall complete a full environmental impact statement as described in section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. § 4332(2)(C)) in connection with the issuance of a permit under section 10 of the Rivers and Harbors Appropriation Act of 1899 (30 Stat. 1121; 33 U.S.C. § 403) and section 404 of the Federal Water Pollution Control Act (33 U.S.C. § 1344) for the construction of a water supply pipeline and related structures for removing water from Lake Gaston (a lake within the States of North Carolina and Virginia) and transporting water to the City of Virginia Beach, Virginia, or the surrounding area.

We sincerely hope that these remarks have been helpful to the Subcommittee.

TESTIMONY OF J. D. EVERETT, EXECUTIVE DIRECTOR, KERR-TAR REGIONAL COUNCIL OF GOVERNMENTS

Mr. Chairman, thank you for affording me the opportunity to express my support for H.R. 4317 and to convey to you the united opposition, of the five (5) counties and fifteen (15) municipalities that comprise the sub-state planning region that I represent, to the proposed pipeline project that would transfer up to 60 million gallons of water per day from the Lake Gaston Reservior to Tidewater Virginia and Virginia Beach.

The Environmental Protection Agency was established for the explicit purpose of preserving our natural resources and to bring a balance of growth and preservation through a carefully planned process that would, to the best of our ability, assure for future generations the usage and opportunity to prosper as we have by the utilization of these resources.

A project of the magnitude of the Virginia Beach proposal should not under any circumstances be approved without a full and comprehensive Environmental Impact Statement being prepared. There are too many documented examples of the travesty of unplanned and uncontrolled growth that have required, at the expense of the Government and taxpayers, enormous amounts of money and needless sacrifice to attempt to correct mistakes after the fact.

This project is not a Lake Gaston/Virginia Beach issue, but one that impacts on the entire Eastern portion of North Carolina, Kerr Reservoir, Philpot and Smith Mountain Reservoir and the entire Roanoke River Basin. All are directly linked and have a significant bearing on each other. Water is one of our most precious commodities and is rapidly becoming a national problem in this country, as I am sure you are aware. We no longer have the option to treat these problems lightly, each one addressed is compounded by our national growth and each mistake becomes more costly as we are no longer dealing with a resource that can be classified as inexhaustible.

We have not and still do not take a position of adamant opposition to Virginia Beach having access to the water just because we want it for our present and future use; but, we have real and legitimate concern for the depletion of this resource to our future generations to provide a partial solution to a problem that is created by poor management of existing resources and inadequately planned growth within the limitations of those resources. You and the present Administration are committing millions of dollars to attempt to correct and clean up the Chesapeake Bay area that is seriously polluted, and Tidewater Virginia is one of the major contributors to this pollution.

The public hearings held on this project by the Corps of Engineers time after time had thousands of people speaking in opposition to this project—their major concern is having a decision made without first having a comprehensive Environmental Impact Statement prepared to a least satisfy all parties concerned that their future needs are not being denied to solve a problem in an area that has already grown beyond its own resources and wishes to grow more by massive inter basin transfer of water which would remove "forever" this resource for the future growth of Eastern North Carolina.

The Corps of Engineers has made mistakes in the past, and we feel that we are entitled to an independent study prior to this project being approved as the consequences are irreversible.

Thank you.

TESTIMONY OF W. J. HARRIS, WARREN COUNTY COMMISSIONER

Mr. Chairman, thank you for allowing me the opportunity to express the concerns of a unit of local government in support of H.R. 4317. I am Walter J. Harris, a County Commissioner from the County of Warren, North Carolina.

Warren County is a predominately rural county with a high percentage of low income populace and a high unemployment rate. It has a real property tax base of approximately $176,000,000. Of this base, approximately 35 (thirty-five) percent is in the area of Lake Gaston and Kerr Lake. It is this tax base that is about to be threatened.

Lake Gaston has approximately 350 miles of shoreline, the majority in Warren County. It has a very slight fluctuation which adds to its attractiveness as a vacation and resort area. Withdrawal of water as proposed by Virginia Beach can have a very serious impact on the area, affecting not only Warren County but also Halifax and Northampton Counties in North Carolina and Brunswick and Halifax Counties in Virginia. Also, these predominantely rural counties are heavily dependent on their tax base to finance local government. Warren County does not want anything to adversely affect its tax base as has occurred in the past.

We have had to accept a hazardous waste storage site, approved as safe by EPA, within the past 4 (four) years. Are we again to be forced to accept something we do not want? The water withdrawal has been approved by another federal agency, the Corps of Engineers, who did so without an Environmental Impact Statement, often required today if a farmer wishes to dam a creek for water to irrigate crops.

Homes located on Lake Gaston are being occupied more and more by permanent residents, attracted to the lake due to its clean water and the very minor fluctuation of the water level. These residents do not want to see their property become less valuable due to the possibility of a greater water fluctuation. Even though the water level may be maintained at a fairly constant level in Lake Gaston, what happens to the residents of the Kerr Lake area, Philpot and Smith Mountain Reservoirs, when water must be released to maintain Lake Gaston? Even today, Kerr Lake often has areas of "mud flats" during the dry summer months when residents cannot avail themselves of property owned for recreational purposes. Its level has been as low as 280 feet from a high of 318 feet.

The interbasin transfer of large quantities of water has been proven to be detrimental to the area from which it is withdrawn. I ask you to take a look at the Colorado River and the effect that withdrawal has had on its basin.

Why not use an alternative? Why ask the residents of northeastern North Carolina and southside Virginia to give up one of their greatest assets? It would appear that a metropolitan area would have the foresight, be able to afford the technology, and have the political weight to cause to be cleared up what has been caused by others without damaging their less fortunate neighbors.

I submit to you that the possibility of adverse and detrimental effects to the areas can be severe in the future. Will any of these areas be able to utilize a resource they presently have or will they be denied this possible usage due to someone else having previously taken advantage of the resource?

An Environmental Impact Statement must be prepared to address the issues raised during the many hearings conducted by the Corps of Engineers. Their finding of no Significant Impact does not address all the issues raised. Warren County does not have the resources to obtain the information necessary to address the issues raised. I doubt that any of the affected counties has.

I urge you to support the legislation calling for an independent Environmental Impact Study. The water is not needed by Virginia Beach today. Surely the time required for such a study will not be as detrimental to that area as the withdrawal will be to northeastern North Carolina and southside Virginia. Our residents will be more satisfied if all the issues raised can be fully answered.

Thank you again for allowing me to present the views of a unit of local government.

Mr. ROE. Please proceed.

TESTIMONY OF A PANEL CONSISTING OF JOE PARKER, NORTHEASTERN NORTH CAROLINA TOMORROW, ELIZABETH CITY STATE UNIVERSITY, ELIZABETH CITY, N.C.; TRAVIS H. TOMLINSON, PRESIDENT, KERR-BUGGS ISLAND LAKE PROTECTIVE ASSOCIATION, RALEIGH, N.C.; PATRICK M. McSWEENEY, ATTORNEY, ROANOKE RIVER BASIN ASSOCIATION; J. D. EVERETT, KERR-TAR COUNCIL OF GOVERNMENTS, HENDERSON, N.C.; WALTER J. HARRIS, WARREN COUNTY COMMISSIONER, WARRENTON, N.C.; AND VICTOR DENTON, CITY MANAGER, ROANOKE RAPIDS, N.C.

Mr. PARKER. Thank you, Mr. Chairman.

I am Joe Parker of Ahoskie, N.C., the chairman of Northeastern North Carolina Tomorrow, an organization formed 2 years ago and funded by the State of North Carolina to promote economic development and growth in the State's 16 most northeastern counties and to protect its environment. Included are Halifax and Northampton Counties where Lake Gaston is located, the counties downstream in the Roanoke River basin and those which border the Albemarle Sound

Northeastern North Carolina Tomorrow provides a regional approach to addressing the concerns of these 16 counties. Our specific concerns on this issue are the effects downstream that this water withdrawal will have on the future development of these counties and the impact on this region. Our organization is opposed to the construction of the pipeline and subsequent withdrawal of water without an environmental impact statement. An environmental impact statement will clarify the potential impact of this project and hopefully will make other alternatives more feasible.

C. E. Maguire, Inc., on behalf of the city of Virginia Beach, submitted a report to the U.S. Army Corps of Engineers in July 1983 which the corps used as the basis for its environmental assessment. On page 80 of that report is a statement which reads:

> Presently, the potential for large-scale industrial growth in the Gaston and Southwestern Region appears limited, based on locational and economic factors.

We can only conclude that this assumption condemns our region to its status quo and that we are to have no economic development, industrial growth or prosperity, regardless of our goals and efforts.

As further evidence that this is the assumption driving the move to transfer our water out of our region, the final environmental assessment signed by Col. Ronald E. Hudson of the Norfolk District of the U.S. Army Corps of Engineers dismisses entirely the potential environmental impacts of the proposed withdrawal on the downstream region of the Roanoke River basin below Gaston Dam.

The assessment is inadequate to the point of being nonexistent on these effects. It cries out for a full environmental impact statement to assess the potential for damaging the ecology and the human environment throughout the 125-mile length of the river from the dam to the point where Albemarle Sound reaches the Atlantic Ocean. Up to now this entire question has been ignored by the corps.

Our organization is concerned about the economic future and environmental welfare of the Roanoke River basin and the Albemarle Sound. Therefore we view this diversion of water as:

First. A threat to water resources needed for increased agricultural irrigation that is becoming necessary to meet increasing production costs and demands. Our region presently accounts for 40 percent of the State's total cash receipts from farm marketing. North Carolina is the Nation's second largest State in farm income. Our region is its backbone.

Second. A threat to the location of new industries in this region. For it is along this river that it would be most desirable to locate many of these future industries.

Third. A threat to providing jobs for our people. Unemployment in our region is approximately 10 percent with a population in excess of 302,000 people, 42 percent of whom are minorities in need of special help in new job creation. We must not do anything that could limit our growth potential.

Fourth. A threat to our ability to improve the quality of life in a region that now has large numbers of economically depressed people. The per capita income in 1983 in our 16 counties ranged from a low of $5,256 to a high of $7,634. We have a high percentage of elderly people; four of our counties are the highest in the State ranging from over 14 percent to a high of nearly 16 percent. The State average is only 10 percent.

Our older citizens, our minority citizens and our youth, our hope for the future, are all threatened by this proposed diversion.

Fifth. Finally, a threat to our ability to maintain acceptable water quality in the Roanoke River basin and the environmental effects upon the Albemarle Sound at the confluence of the Roanoke and Chowan Rivers. Algae blooms have become epidemic in the sound the last couple of years.

We know that agricultural irrigation needs of the lower Roanoke River Basin will increase. This is documented in a 387-page report, "Projected Irrigation Water Requirements for Northeast North Carolina Above Cape Lookout for the Year 2030," by Dr. Ron Sneed, water management specialist, North Carolina Agriculture Extension Service. This report was funded in part by the U.S. Army Corps of Engineers. Dr. Sneed addressed just the seven-county area of North Carolina through which the Roanoke River flows below Gaston Dam. He documented the significant expansion in irrigation which has occurred over the past 3 years and projected that farmers will accelerate this development as costs rise and it becomes essential to improve yields. He projects that by the year 2030, if only 50 percent of the potential acreage is irrigated in these seven counties—350,000 acres—it would translate in this manner: If only half of withdrawals for irrigation were taken from stream water, which is the current ratio, the lower Roanoke River Basin farmers would require approximately 375 million additional gallons per day to meet their agricultural needs. I repeat, 375 million gallons per day.

No where has this been addressed by the Corps of Engineers. This alone is enough documentation to require an environmental impact statement.

What effect will these increased irrigation needs have on the flow and level of the Roanoke River, Kerr Reservoir or the Roanoke River Dam if the pipeline diversion takes place? The Corps does not know because it has not addressed them.

Contrary to the C. E. Maguire report, northeastern North Carolina is having industrial growth. This growth must continue if we are to improve the lives of our people. Even as our agricultural production grows, employment patterns are changing due to technology. People who once were employed to cultivate the soil must now seek new jobs in business and industry. We need jobs that will exist through industrial growth.

For example, Champion International Paper Co. is planning a billion dollar plant in Halifax County on the south side of the Roanoke River. Water resources are crucial to their plans. This plant cannot be built if water from the Roanoke River, required to meet water quality standards, is diverted out of the basin. American Pacific Mill plans another plant for Halifax County. These plants alone represent some 4,000 jobs to the region. These two plants can account for a 30-percent reduction in our regional unemployment.

It is obvious, that with industrial growth comes growth to our communities. Many of our region's communities now depend on groundwater. Municipal systems are being replaced by countywide systems. Our counties will have to turn to the surface water to supply future needs. All the projections Virginia Beach and the corps have used underestimate our future surface drinking water needs. We too, will have people in need of water but with no alternative means to meet these needs as has Virginia Beach.

The withdrawal by the pipeline could lower the flow of the Roanoke River, jeopardizing water quality in the lower portion of the river. This low flow in the river could very easily affect water quality as far away as Plymouth, N.C., affecting the continued operation of the large Weyerhaeuser plant there which employs 2,500 of our people, and which uses approximately 45 to 50 million gallons per day of water from the Roanoke River and discharges a like amount of industrial waste water daily. No study of this question has been made, especially of the effects in low-flow periods such as we experienced in last summer's drought.

This reduction in flow must be studied so we know the potential impact on both our future agricultural requirements and our plans for industrial growth, especially since there would be less water available to accommodate any increased demands for discharges into the river. A thorough environmental impact statement needs to look at these impacts.

Such a study should take into account that Virginia Beach projects over 20 million gallons daily of its proposed 60 million gallons per day diversion will be used for industrial growth in Virginia Beach in the year 2030. Surely the Congress will agree that a study ought to be made to determine whether the need is greater for jobs in underdeveloped northeastern North Carolina or in the runaway growth center to its north. Simple justice demands that the question at least be looked at, not simply ignored as the corps has done.

Our final concerns are the potential environmental effects on the Roanoke River and how the reduced flow will affect Albemarle Sound. The Wilmington District of the corps advised the Norfolk District to consider and discuss in the environmental assessment effects of the Lake Gaston withdrawal on salinities and trophic conditions in the sound. This advice too, went unheeded.

The Lake Gaston withdrawal, in our opinion, will impact upon the water quality of the Roanoke River and most certainly on the hydrology of the Albemarle Sound. Since no study has been made, no one is in a position to confirm or deny our contention.

The level of fresh water flow in the river will most likely influence salinity conditions in the Sound. Water quality in the Albemarle Sound could also be altered by changes in the frequency, duration and quantity of scouring velocities and flows in the river.

Additionally, the settling of suspended solids and sediments that travel through the river to the Sound could be affected. These changes could change the aquatic balance now existing in the Sound. The Corps may well put our already threatened commercial fishermen out of business.

Recognizing that the Chowan River waters are highly polluted, any change in the dilution of these waters in Albemarle Sound, attributable to a decrease in the fresh water flow of the Roanoke River, is certain to affect the overall water quality of the Albemarle Sound. These questions need a thorough examination. It will not be made unless an environmental impact statement is mandated.

In conclusion, we strongly believe in the good economic prospects for northeastern North Carolina and the Roanoke River basin. We have available land. Our transportation access is improving. We currently have a good water supply if we are allowed to maintain it. We cannot accept Virginia Beach's environmental report that the potential for growth in our area is "limited."

We have people who will need water, good quality water. We have a bright future, but only if we have water for today and 50 years hence.

Can one city, with alternative water sources already available, be permitted to drain off the future of more than 300,000 people in northeastern North Carolina? Surely the Congress will answer "No" to this question.

While the corps has projected the applicant's water needs 50 years hence, that same consideration has not been given to the needs of other existing and potential users of the water of the Roanoke River over a comparable period. The corps' final environmental assessment discusses the project's detrimental effects only in terms of its effect on the environment as it exists today, and only upstream from Gaston Dam, while establishing the fact that there will be minimally acceptable levels of flow in the Roanoke River downstream. The corps has made no study to establish this as a fact.

Our concerns nor the environmental issues downstream were not addressed in the corps' findings of "no significant impact."

We ask only for our "due" consideration. We seek a full environmental impact statement to examine these issues.

It is our belief that a complete and factual environmental impact statement will support our position of "no Lake Gaston pipeline."

Therefore, Mr. Chairman and members of the committee, we urge the speedy passage of H.R. 4317.

Thank you.

[Map provided by Mr. Parker follows:]

NORTHEASTERN NORTH CAROLINA
TOMORROW

1. Beaufort County
2. Bertie County
3. Camden County
4. Chowan County
5. Currituck County
6. Dare County
7. Gates County
8. Halifax County
9. Hertford County
10. Hyde County
11. Martin County
12. Northampton County
13. Pasquotank County
14. Perquimans County
15. Tyrrell County
16. Washington County

Mr. ROE. Thank you.

Let me point out what an environmental impact statement is. That is a very important thing for people to understand. It is not a water distribution plan for North Carolina or Virginia. It is given on a particular issue. I don't mean to be vociferous, but I think it is important to clarify that issue. Everybody seems to be testifying to the issue that we can wave the magic wand and have an environmental impact statement and all of the water problems will be solved. That is not what an environmental impact statement does at all.

I think it is important to interject some of the facts, and what is important is suppose Virginia takes the position North Carolina does not have the right to draw any water either, so there is no sense in spending 35 years in court and everybody spending tens of millions of dollars in legal fees, and so on, unless we look to equitable distribution between the two States so we can meet their needs. I think it is important to say that to you right now. Otherwise, we can go and say OK, do that environmental impact statement and I guarantee everybody in this room, when that environmental impact statement will be done, you will be back here with us as we hold other hearings because environmental impact statements are judgmental at best.

In order to solve this problem, what we have written into the water resources development bill which has gone through subcommittee and full committee and we are getting ready to go to the floor of the House, every single State is affected by that legislation, but we found out something. When we looked at the problem, we were affected by environmental impact statements that went somewhat as follows: Under the law, the Corps of Engineers is the leading agency, like the mother hen, if you like, and then they deal with the shellfish group, the wildlife group, the water resources group, and so on, and each one inputs their input.

When that input comes back, it goes through the district engineer who makes his recommendation, and then it goes on up to the Corps of Engineers in Washington. There are all kinds of diverse facts involved. At that particular point, the chief makes his decision and then it comes to the Congress and a recommendation from the corps.

There has been no environmental impact statement, barring none, in the 15 years I have been on this committee with which everybody agreed. Therefore, Solomon has to decide who will benefit and who will be hurt.

In view of the fact that Congress does not speak to that issue and that the law is not set up that way, the cases have gone into court. Some cases have been in court 7, 8, 9 years all over this country.

The increased cost of construction has been on the average of 15 to 16 percent over the last 5 years.

Projects we evaluated recently, 7 or 8 years ago were evaluated at $110 million. Now the figure is $265 million.

What we are trying to say here is if we do not solve this allocation of water between the two States, which is the fundamental issue, it is becoming clear through all the testimony that the two brothers are going to be fighting this for the next 20 years and it

will not help the people of North Carolina any more than it will help the people of Virginia.

Do not consider this as an admonition. It is just a summary of the facts. However, I do not want anyone going out of the room feeling that the environmental impact statement is going to solve everybody's problems.

Mr. Tomlinson, we would be pleased to hear from you at this point.

Mr. TOMLINSON. Mr. Chairman, you have my prepared statement and I will cover a few brief points.

I speak as president of the Kerr-Buggs Island Lake Protective Association, so named because we want to keep the two States compatible, one being a North Carolina name and the other being a Virginia name.

Mr. ROE. We will put you up here if you continue on that note.

Mr. TOMLINSON. I am a retired individual. I am not a Government employee. I have no income except my own to come to these meetings and this is about the 10th one on this subject.

The members of the association are upset. They are upset because they do not know what is going to happen.

You have covered these questions. You have raised them. The reason we are here to support an impact statement is to find out a little bit about what it is all about. We want to make this one point before you get tired of hearing it.

Mr. ROE. I will make a point to you first. This morning when I came into the room and we were presented with this case, other than seeing the witness list, I do not think there was anyone outside of the distinguished member from North Carolina who was versed in this subject who knew where Lake Gaston was. Now, you are reeducating us as to the issues. We had not heard this before. We could be considered the arbitrators.

Mr. TOMLINSON. I cannot pass up the opportunity to say to you I would like for you to fly from here to Raleigh and fly over the water I flew over today which is in the Virginia area, and we talk about going down to the Roanoke River basin. You cannot get around Norfolk for all of the water, water, water, and it is not all brackish.

The Congress has, as has been said several times today, provided Kerr Reservoir for flood control, the creation of electricity, and so on. It seems unreal to me that we should impose storage of drinking water for an area 85 miles away without the Congress being involved.

We have a few visitors at Kerr Lake each year. In 1983, we had 3,676,700 for recreational purposes.

The people that I speak for are the people who utilize the facility and entertain the visitors and, hopefully, help improve the possible use for the benefit of the public facility that all of us, as you have said, have paid for.

There are a lot of businesses involved. It says so in the statement. If you go on over to about page 3, you will find reference to the amount of footage in the reduction of the elevation of the water by the withdrawal of 60 million gallons a day.

We have been talking about the 2 or 3 inches. In the corps' report, it says 1.2-feet reduction in the elevation of water as a max-

imum when the water is at its lowest point. When the water is at its lowest point, the people in Virginia Beach are going to be the thirstiest as will be everybody else. So, it is a critical point.

If I may, Mr. Chairman, I want to spend just a half a minute running through two or three points.

We talk about the route that the 85-mile pipeline is going to take. Mr. Watts did an excellent job of that, but we don't need an 85-mile pipeline to pump a river out of Roanoke. This is going to go over, under and around Lake Gaston.

Why do you have to conserve water if you are standing in it knee deep? Studies? Yes, we have done lots of studies and attended lots of hearings. The Members of Congress know what hearings are for. Hearings are to comply with the statutes on the books. We all attended hearings in great numbers.

I think that when you talk about sharing this water, what do you share? In a partnership between a man and a woman, his work, her work, or do you put it all together and share it? We are just talking about one basin. Testimony was given a few minutes ago that there were several basins involved.

Now, my principal point that I would like to leave with you, Mr. Chairman, the justification now being used for the approval of this program is based on today's circumstances.

Now, when is the withdrawal going to take place, beginning 10 years from now and going 50 years?

Now, we say look at the system during the time of the withdrawal and we see what effect it is going to have. There is no way of telling the impact on this whole program without looking at it down the road over the 50-year period that we are talking about, and then there are only two small paragraphs at the back of the corps statement on this. The property owners and visitors of Kerr Lake are concerned, and their apprehension is multiplied by the corps' failure to provide an EIS. In the absence of an EIS, the precedent is staggering.

If Virginia Beach is taking from our lake, who is next and how many will follow? Members of this committee have raised this question also.

If one man can make a decision affecting so many people without regard to the unknown consequences and then decide for himself that no significant effects are anticipated, somebody needs to make an in-depth study, and this is why we are here.

Thank you.

Mr. ROE. Mr. McSweeney.

Mr. MCSWEENEY. Mr. Chairman and members of the subcommittee, I apppreciate your taking the time. I know it is late in the day, and your admonition to be brief, I believe, will be adhered to.

Let me introduce my role first because I think it is important for you to know, first of all, that I am legal counsel to the Roanoke River Basin Association which is presently embroiled in litigation. There are three pending lawsuits, one in Raleigh and two in Virginia, all in Federal district court.

We are named defendants with the State of North Carolina and four individual members of the association in a suit brought by the city of Virginia Beach.

There is also a lawsuit brought by the city of Virginia Beach against Champion International and Weyerhaeuser. Both of these are class actions, requesting the court to address the matter as a class action in each instance.

The State of North Carolina has filed a suit in Raleigh against the corps and a number of individuals, and a number of local governments have suggested they intend to intervene in that litigation.

That is a very superficial outline of the litigation. I think the point that was made before by the attorney general of North Carolina and others is back of all of this talk today. If history since 1969 tells us anything, we will be in litigation for some time.

Now, the fact that we are a defendant does not necessarily mean we are an unwilling party to the challenge or the issues that will be litigated, but I can assure you that these individuals fully intend to litigate those issues.

I am here in the unusual capacity as a lawyer asking you to take some business away from me.

What this bill asks—and I will get to some of the concerns I have about this bill—is exactly the same thing the State of North Carolina has asked in the Eastern District of North Carolina in that litigation.

I think the point was well made earlier that this bill may be in fact a shortcut. It may compress the period. I am not so naive as to believe there is not someone somewhere who will not complain about the environmental impact statement, if and when one is done. However, I will say if the impact statement is done the proper way, the review period involved in litigation of that issue will be far less than the review period involved in litigating the questions that are presently pending.

Basically, what we will be involved in later, once an environmental impact statement is prepared, is a review of the good faith objectivity of that document, and I think we will proceed much faster when that is done.

Coming to the legislation at issue today, I do have a point, Mr. Chairman. I do not know that I differ with you. I would like to go one step beyond the point you made. I am certain the basic principal, underlying policy issue is one of equitable apportionment between the States. I think it goes beyond that.

We have been saying this for a number of years. The association has taken the position for many years that it is a mistake to divorce water quality concerns from water quantity concerns.

If we accept the proposition which has been advanced by a number of entities, including the State health department and the State water control board in Virginia, and the Corps of Engineers, that all you need do is when you pollute one source of water, is to go one step beyond, and pollute further.

Obviously the coastal areas of this country will not have sufficient water. Sooner or later we must address reuse. We propose a very specific alternative which has never been considered—never been considered.

We suggest, and I think based upon some careful analysis, that that alternative would be $100 million cheaper in terms of capital investment—$100 million cheaper. It would also help ameliorate

problems in the lower Chesapeake and the tributaries—the Elizabeth River, the lower James River, which are now in this condition, contrary to Mr. Watts' statement.

The Chesapeake Bay study did identify it as polluted, and one major contributor is the region that we are talking about—Norfolk, Virginia Beach, Portsmouth, Suffolk. They contribute directly to the pollution. Some of these discharges are close to some of the biggest oyster beds in the country.

We have a problem which our Governor seems to compartmentalize. I have yet to hear him recognize the connection between what he is proposing to do to reduce the pollutant load from those municipal treatment plants, to treat this drinking water in this region, and the problem we have today in finding water for Virginia Beach.

This is not a suggestion that we came upon ourselves, that Virginia Beach, or the southeastern Virginia community considered indirectly the reuse of wastewater as a source. The suggestion was made by the then chairman of the State water control board in 1974, and with your permission and the committee's permission, I assume the entire documents submitted to the corps, and upon which it made its determination, would be before the committee. If not, I would like to supplement my testimony with some documents that we submitted.

I did not want to paper the record with a lot of duplicated documents.

In that statement, there is a statement in 1974 by a chairman of the State water control board, a very accomplished gentleman, who saw the long-term answer to the region's problem, and he was not just talking about the Virginia Beach—a long-term direct reuse of water. Virginia Beach cannot consider that issue. It took it up as an alternative, and rejected it in one sentence.

Its basis was we do not have sufficient surface for groundwater within the city limits of Virginia Beach to provide that alternative.

When we addressed that issue to the Corps of Engineers, they recognized they could confine consideration of that alternative just to Virginia Beach, but did they look at the issue? Absolutely not. They deferred to the State health department.

The health department objected in a very cursory form, and I submit that there is absolutely no factual basis, if we have to litigate the issue, which we probably will, there is no factual basis for the health department's rejection. Its rejection is based, in its own words, on a value judgment. The value judgment is whenever there is a range of alternatives, the source of the proponent must always look to the most pristine source.

The absurdity of that proposition ought to strike everyone.

The water quality in Lake Gaston is much better. By that standard, everyone should put their straw in Lake Gaston. It ignores the long-term problem that the developed areas in this country are going to have to face. They are going to have to live, to a large extent, with the limits within their own resources, and be responsible for reusing directly or indirectly the product they already have at hand, rather than choosing the expedient, the lazy solution of going up 100 or 200 miles distance, because that is no long-term solution.

To summarize, Mr. Chairman, I do not think the EIS is going to answer that question, unless that policy issue is addressed, and policy assumptions which undergird the decision of the court have to be addressed at some point, either by the respective Governors or by the city of Virginia Beach, or by this body.

Sooner or later, someone has to take on that policy issue.

Now, what are the assumptions that we are going to grow with? Are we going to allow these rapidly growing areas to constantly reach farther and farther inland for their source of water? I submit we simply cannot afford to do that, looking into the next century.

Thank you, Mr. Chairman.

Mr. ROE. Mr. Everett.

Mr. EVERETT. Thank you, Mr. Chairman.

I will be very brief, and make only a couple of points. You have my testimony.

For your information, I think that you alluded to the fact that you were not familiar with the area. What we are talking about is really not a Virginia Beach and Lake Gaston issue. It is a Kerr Reservoir issue, but it goes beyond that, because Kerr Reservoir has two other major reservoirs above it to the west, Philpot Reservoir and Smith Mountain Reservoir, which is also a flood control reservoir, but it feeds into the Kerr headwaters.

Kerr Reservoir is, first and foremost, a flood control reservoir. That is its first priority by the corps.

The second priority is recreation. The third is power generation, and the proceeds from that power are used to maintain the reservoir and the operation of the reservoir, and then the water storage capacity is the other alternative.

Our major concern is—and I addressed this question to the Colonel at the Wilmington Corps. I asked, what is your policy on this reserve water resource that is available to be utilized by the communities. Their policy is simply this: There are *x* number of gallons there—first come, first served. First in, first out.

In making a decision to allocate up to 60 million gallons a day from this pool, the corps is not making any projections on future usage. They are making a decision based on today's requests. It is a very simple process for them.

Our concern has been, all along, it has not been our opposition to Virginia Beach sharing in this resource, but having adequate information and adequate protections that look at the long-term needs of both States, and then beginning to develop some policy and some formula that can be realistically addressed to answer all of our concerns, because we do not know if there are *x* number of gallons there, and it is allocated on the corps' present policy, and the massive interbasin transfer of water that is being proposed to serve the Tidewater area.

It could very well be needed, and based on what has been stated as the needed quality of water, it could probably serve the entire eastern part of Virginia. However, this also brings serious concern to the people west of Kerr Reservoir. It reaches as far up as Roanoke, Va., the western part of the State. They have expressed concern, and they are asking questions, and we are not able to give them the answers.

I represent a five county economic development district. I have 5 counties and 15 municipalities in my district. They have all stated opposition to this project, not on sharing the resource, but based on not having adequate information to realistically determine what our future needs are going to be, and how are you going to equitably distribute a resource if you do not have some projected idea of what those future needs will be.

I have the greatest admiration for what you are trying to do, and trying to establish a national policy. It is a critical issue. It is a national problem. It is not a local problem.

Our water resources are precious, and they are not inexhaustible, and any mistakes made at this point are irreversible mistakes.

The Corps of Engineers has demonstrated in the past that they do not have all the answers. We have seen their mistakes. Their mistakes are extremely costly, and what you are appropriating at the present time for the pollution of the Chesapeake Bay area basically stems from some mistakes made in the past.

We cannot allow continued uncontrolled and unplanned growth and unmanaged resources to solve immediate problems. It is much more serious than this.

I do appreciate your statement on the fact that an environmental impact statement is not the answer to this problem. I understand that. We need some type of study based on realistic projections, based on the utilization of these resources, that do not exist at the present time, but decisions, and hard decisions have to be made on the distribution of this resource. Without that information, a very dangerous precedent may be set, and that is our major concern.

Thank you very much.

Mr. ROE. I think you have summed that up very well.

Mr. Harris.

Mr. HARRIS. Thank you, Mr. Chairman.

I will slip quickly through my statement, and try to answer a couple of questions raised this morning, as to high and low watermarks of Kerr.

This information comes to me from the Corps of Engineers. It has been as low as 280 feet, to a high of 318 feet. Mud flats oftentimes exist in the dry summer months.

People with very expensive recreational homes are unable to use them, because they are unable to utilize their recreational equipment on Kerr Lake.

Lake Gaston has some 350 miles of shoreline, and the majority of that is in Warren County, N.C. Lake Kerr has in excess of 800 miles of shoreline. The majority of that shoreline will be in Mecklenburg and Halifax County, Va. They have more to lose from a property tax standpoint than anyone else in the area.

I have addressed the issues of alternatives, and I have addressed questions as to why a rural county, and I mean strictly rural, should have to run the risk of having a portion of its tax base eroded simply to furnish water to a metropolitan area, which should have funds to provide technical resources which we do not have. It should have political weight which they should be able to use, if the water were clean.

If the water were used to clean up another source for them, why spend more for something that could adversely and badly affect us?

I acknowledge, as you pointed out, that environmental impact statements do not answer the question, but they will certainly address some of the questions raised by our populace.

Thank you.

Mr. ROE. Thank you very much.

Mr. Denton.

Mr. DENTON. I am Victor H. Denton, city manager, and I am speaking for the city council of the city of Roanoke Rapids. Roanoke Rapids is the largest city on the Roanoke River.

We are strongly opposed to Virginia Beach's proposal to withdraw water from Lake Gaston.

To be very frank, most of this concern comes because no one really knows the environmental and economic impact of this proposed project.

We feel that this proposed project will have a significant adverse impact on the environment of North Carolina and Virginia, yet the U.S. Corps of Engineers have concluded that a formal environmental impact statement is not required.

Experience has proven that environmental impact statements are vitally important in evaluating proposed projects. Many businesses, industries, cities and towns all over this country have been required to spend large sums of money on environmental impact statements for even very small projects, yet the corps has concluded that an impact statement is not required for this project; a project tentatively estimated to cost about $200 million, and a project that has the potential of adversely affecting the environment of Virginia and North Carolina from our mountains to our coast.

We feel that if an environmental impact statement is not required for this project, it utterly makes a sham of the whole environmental process.

It is our feeling that not only an environmental study is needed but also an economic impact study. This is because the people in the Roanoke River basin in Virginia and North Carolina are very dependent on the quantity and quality of the water in the Roanoke River.

I have here the environmental report for the proposed project prepared by the engineering consultants for Virginia Beach. Gentlemen, the words "agricultural irrigation" or "economic impact" as it pertains to the Roanoke River basin are not mentioned in this 2-inch report.

It is a well-known fact that water consumption is greatest during a drought. We are not necessarily concerned about the proposed withdrawal of 60 million gallons of water during normal flows. We are, however, vitally concerned about the removal of any water when Kerr Lake is down, when Gaston Lake is down, when the Roanoke River is at minimum flow.

We are concerned about the effect this proposed project will have on agricultural irrigation. Five years ago, there was little irrigation in the Roanoke River basin. Today, to be competitive, farmers must irrigate. It is estimated by agricultural authorities that during the dry spell last summer the farmers in Halifax County in which the Roanoke River is located used 120 million gallons of Roanoke River water per week to irrigate. It is estimated that the farmers across

the river in Northampton County used 90 million gallons per week. Above Lake Gaston, greater amounts were used. If we project forward the growth in irrigation over the last 5 years, by the year 2000 or sooner, it is possible that we may have to limit agricultural irrigation to avoid major low-water problems in the Roanoke River and our lakes.

Gentlemen, we living in the Roanoke River basin have no alternatives for a water source. Virginia Beach has several.

Let me ask who is going to police the water withdrawal out of Lake Gaston? Virginia Beach states that their maximum withdrawal will be 60 million gallons per day. If they need more than this, who will keep them from opening the valves more and increasing the pressure to double or triple this amount? If the lakes are down during a drought, who is going to be charged with the responsibility of telling Virginia Beach that they cannot get any more water out of the Roanoke River basin?

Gentlemen, in Biblical times, the lustful eye of David got him in trouble. He had a wife, but he lusted for a beauty, a beauty that was not rightfully his. There is a parallel in the proposal before us.

We feel a comprehensive environmental and economy study will overwhelmingly show that this proposed project is not feasible.

Thank you, sir.

Mr. ROE. Thank you very much.

We have some rollcall votes. We will have to recess for 15 minutes, and then we will return for our question period, and then we will listen to the next panel.

I do not want anyone to feel the chairman is attempting to rush anyone. I just want to be able to get everybody's words on the table.

Let us now recess for 15 minutes, and we will return.

[Short recess.]

Mr. ROE. I think the panel did a good job on their presentation.

I do not know what further we can add. I think we all understand what the situation is. There has been some added information which has been helpful, in my judgment.

I think one thing that is becoming very clear is that a lot of the confusion seems to arise out of the point that there is not a pool of solid information that people feel comfortable with.

I do not know whether, for example, the State of Virginia and the State of North Carolina have gone into master water resources development plans for their respective States.

As you recall, back in the 1960's, they talked about drought, and even recently the drought was so bad in our area that they had to build a pipeline over the George Washington Bridge to get into New Jersey. So we understand that.

What I am fearful of is that I think the allocation of that water supply is what is important to both respective States.

Regrettably, I will get some information, but not the broad breadth of information we have been talking about, unless an environmental impact statement was made on the entire State, but that does not mean it rules it out.

I think you have made your case. I do not have anything more specific to put in the record. I know you have to catch a plane.

Thank you very much for being with us.

Mr. McSweeney, your points were very well taken, but this committee is not fully aware of what you were saying, because we know that your position was absolutely correct. This committee is in charge of water resources development and clean water bills, and a million other things. We totally agree with you, because the Clean Water Act, in my judgment, is a water resources development.

For some reason or other, we cannot seem to get the show put together here, because there are 17 subcommittees in the House alone that have jurisdiction over water, in one way or another.

When you speak of renovated water, we use it continuously. In our State, for the cities of Paterson, Passaic, and so on, the water is taken out and put back in. So we understand what you are talking about. It is just unfortunate that the Congress, or whomever, does not provide the necessary resources to do the work you are speaking of. Your point is well taken.

Our last panel is Mr. Barr, Mr. Anderson, Mr. Henne, and Dr. Hoffman.

The full text of your prepared statement will appear in the record at this point.

[Statements referred to follow:]

STATEMENT BY W. EWELL BARR, ON BEHALF OF THE CITY OF DANVILLE, VIRGINIA, TO THE SUBCOMMITTEE ON WATER RESOURCES REGARDING H.R. 4317

Mr. Chairman and Members of the Subcommittee, my name is Ewell Barr. I am City Attorney for the City of Danville, Virginia, and I appear today to convey to the Subcommittee the City's support for the enactment by the Congress of H.R. 4317. On behalf of the City, I thank you for this opportunity to express that support and to explain at least one reason therefore.

The purpose of H.R. 4317 is to require the preparation of an environmental impact statement with respect to the 84.5 mile pipeline from Lake Gaston to a point near Suffolk, Virginia, which has been proposed by the City of Virginia Beach to supply water to meet its future needs. The Corps of Engineers has decreed that no environmental impact statement is required for this project, reportedly the largest public works project in the history of the Commonwealth of Virginia.

While the Corps' decision and its stated reasons therefor are, in the opinion of the City, subject to challenge on many grounds, I shall restrict my comments to one aspect of the Corps' findings which is of particular application and concern to the City of Danville and its neighboring jurisdictions.

Danville is a city of approximately 46,000 inhabitants. It is located on the Dan River at the Southern Boundary of the Commonwealth of Virginia, approximately 200 miles inland from Virginia Beach and approximately 80 miles west of, and upstream from, the point in Lake Gaston at which Virginia Beach proposes to install the intake structures for its pipeline. About 45 miles to the southwest of Danville lies the City of Greensboro, North Carolina, with a population of approximately 150,000.

Greensboro has publicly acknowledged its desire and intent to tap the Dan River upstream from Danville as a source of additional water for its future needs and, in the words of its City Manager, to pump the water "just over the hill" into the Cape Fear River Basin. The Dan River is a major tributary of the Roanoke River and a part of the Roanoke River Basin. Greensboro has also reportedly acknowledged that it views the Virginia Beach Pipeline proposal as a precedent and guide for its withdrawal and transfer of water from the Dan River.

Thus, when the Corps of Engineers expressly finds that the proposed pipeline project "would not constitute a precedent and would not necessarily stimulate future, similar proposals", it ignores existing fact and inevitable environmental consequences. To say, as the Corps does, that any future, similar proposals "will be thoroughly evaluated in terms of impact and available alternatives" merely begs the question. Such a rationale says only the obvious: past errors of judgment are plainly discernable in the clarity of hindsight. Such reasoning avoids and is contrary to the very purpose of the

National Environmental Policy Act and the environmental impact statements required thereby.

Now, not later, is the time to evaluate, in detail and with care as the law requires, whether the project "is related to other actions with...cumulatively significant impacts", to determine "if it is reasonable to anticipate a cumulatively significant impact" and to recognize, as the law also requires, that significance of impact "cannot be avoided...by breaking it down into small component parts". We submit that the Corps has failed to address this real and legitimate evaluation factor and that it should and must do so. This is what an environmental impact statement is designed and intended by law to do.

The City of Danville accordingly needs, deserves and respectfully requests the analysis and answers that only an environmental impact statement can provide. Enactment of H.R. 4317 will assure that environmental impact statement.

Again, I thank you.

City of Danville

F. SEWARD ANDERSON, JR.
COUNCIL MEMBER

P. O. BOX 3300
DANVILLE, VIRGINIA 24543

February 7, 1984

MR. CHAIRMAN AND COMMITTEE MEMBERS:

I am Seward Anderson, member of the Danville, Virginia City Council. Thank you for allowing me to appear before you today.

Do not allow the brevity of my remarks to belie their intensity.

Gentlemen, We, as a Municipal government, enthusiasticly support House Bill Number 4317, and just as vigorously oppose the Corp's proposed pipeline.

We ask that the Congress require the Corp to do no less than the Corp requires everyone else to do--- Perform an Environmental Impact Study.

As an adjunct, I would like to add that Danville, Virginia is not only located in the Roanoke River Basin, but it also occupies a rather precarious economic position as well. Successive administrations have restricted, regulated, and maligned our primary cash crop--tobacco; they have likewise allowed cheap foreign textiles to inundate the Nation almost unrestricted undermining the City's largest employer.

The Dan River is Danville's greatest natural resource. We feel that if an Interbasin Transfer precedent is set, it will foster artificial growth, and will be, in effect, an Interbasin Transfer, of industry, commerce, and economic well-being.

Again, Gentlemen, We support House Bill Number 4317, and ask your support as well.

REVIEW OF ALTERNATIVES TO INTERBASIN TRANSFER

Background

For a number of years the West Piedmont Planning District Commission has stated its opposition to interbasin transfer and abandonment of the riparian doctrine regarding the control and use of water. Interbasin transfer, as advocated by the State Water Study Commission and particularly cities in the Tidewater area of the Commonwealth, would allow the transfer of water from one river basin into another river basin. It has been asserted by many that this is not legitimate under Virginia laws--thus, proponents have sought new Virginia statutes to assure that transfer will be legal in the future.

In an extreme example of an interbasin transfer proposal, Virginia Beach could pipe water from the Roanoke-Dan River Basin to the Virginia Beach-Tidewater area to serve industrial, commercial, resort, and residential real estate interests in the Virginia Beach community--as well as other communities if the city chose to be a water wholesaler. The Tidewater Virginia Beach area officials have been the most vocal supporters of interbasin transfer. Another transfer proposal example might be an attempt by the City of Greensboro to impound water on the Mayo, Smith, or Dan Rivers and then pipeline transfer to serve the Greensboro metropolitan area.

A key consideration should be that water withdrawn from the District's rivers for use in meeting current needs of the other areas will withhold or diminish opportunities for its towns, cities, and counties to meet their own future needs for water in anticipated commercial, industrial, and agribusiness development and in protecting against future drought conditions.

Request for Study

The staff and Physical Planning Policy Advisory Committee of the West Piedmont Planning District were asked to review available alternative(s) versus interbasin transfer proposals being considered primarily by Virginia Beach at this time. It is expected that efforts will continue to overturn any existing prohibition of interbasin transfer and to enact necessary legislation that will change Virginia water policies and permit interbasin transfer.

In the 1982 General Assembly, House Bill 503 was introduced to change state water policies and allow basin transfers. The Commission also asked the staff and Physical Planning Committee to review modifications to the bill by the Pittsylvania County Administrator and staff and then report these modifications to the Board of Commissioners.

Research Efforts

The WPPD staff and Physical Planning Committee have undertaken a review of proposals for interbasin transfer and alternative measures to provide water supplies. The following agencies were contacted for information and documentation: State Water Control Board; State Water Study Commission, created by the General Assembly; Virginia Water Resources Research Center; Director of Public Utilities, Virginia Beach; U.S. Army Corps of Engineers, Norfolk and Wilmington.

The above-mentioned agencies either were not able or chose not to provide studies demonstrating the practicality of using water supply schemes other than the employment of interbasin transfer via freshwater impoundments and pipelines. Following recommendations of Physical Planning Committee members, the staff contacted the DuPont Company, Incorporated, and American Water Services, Incorporated. These firms were able to supply information on costing desalination (desalting) systems that could be used to change either seawater or brackish (briny) water into potable, drinking water. It is believed that quantities of these types of raw water should be available in the immediate vicinity of Virginia Beach and other Tidewater communities--eliminating the need to go outside the Tidewater or coastal areas for raw water supplies via interbasin transfer. Seawater in this case contains substantially higher amounts of salts--that would have to be removed--than brackish water that might be found by sinking wells into the acquifer or by collection from estuarine areas or bays.

Cost Comparisons of Alternatives

The staff chose to intially review a set of alternatives on the basis of cost, ultimately showing the relationships of: a) annual cost of operation including debt service of capital and operation/maintenance costs; and b) cost per 1,000 gallons of potable water.

The alternatives selected for review included two interbasin transfer proposals to be compared with two proposals employing desalination. The proposals are generally described below:

APPOMATTOX RIVER (LAKE GENITO-LAKE CHESDIN) PROJECT. This project would entail: a) the development of a new reservoir, Lake Genito, that in combination with a single system with existing Lake Chesdin would yield 225 mgd if needed; b) the development of a 93-mile, 5-ft. diameter pipeline and pumping stations; and c) the construction of a 60 mgd capacity water treatment plant at Virginia Beach (or alternatively on the Appomattox River).

LAKE GASTON PROJECT. This project would entail: a) an intake at Lake Gaston in Brunswick County; b) an estimated 100-mile pipeline; and c) expansion of an existing water treatment plant.

REVERSE OSMOSIS (RO) DESALTING PLANT TO PRODUCE 40 MGD OF POTABLE WATER USING BRACKISH WATER SOURCES. This project alternative could employ Dupont's Permasep system or similar system to produce 40 mgd of potable water: the raw water would be obtained by pumping brackish (saline) water from the acquifer in the Virginia Beach vicinity. Surface waters should also be investigated as potential sources; additionally,

effluent from wastewater treatment plants could be considered as raw water sources to complement other sources since the RO process combined with secondary treatment should leave the finished water free of all impurities.

REVERSE OSMOSIS (RO) DESALTING PLANT TO PRODUCE 40 MGD OF POTABLE WATER USING SEAWATER. This project alternative could employ DuPont's Permasep system or similar systems from other firms to produce 40 mgd of potable water; the raw water would be seawater which could be obtained from Hampton Roads, Hampton Roads estuarine areas, or the Atlantic Ocean--all sources adjacent to the City of Virginia Beach. The Permasep reverse osmosis system forces impure water through membrane filters made of hollow fibers; on one side of the filter, salt in water is trapped, pure water passes to the other side. By 1980, plants had been built around the world with an installed capacity well over 200 million gallons per day. (Note: 1 mgd = 1,000,000 gallons per day)

NOTE: Both RO alternatives were sized at 40 mgd commensurate with the design demand for treatment and attendant costs scheduled in studies of the Appomattox River interbasin transfer alternative. Capital facilities for the interbasin alternatives were sized for 60 mgd transfers and treatment levels; RO facilities are modular and can be easily expanded when needed. Virginia Beach demands are not expected to reach 40 mgd until the period 2000-2010. Annual treatment costs (O&M) were based on a 40 mgd level of production for all project proposals. The following table summarizes and compares costs for the four alternatives noted above; succeeding tables give detailed cost breakdowns and explanations.

COST COMPARISONS FOR WATER SUPPLY ALTERNATIVES FOR THE VIRGINIA BEACH AREA

	Interbasin Transfer Alternative Using Lake Gaston	Interbasin Transfer Alternative Using Appomattox River	Seawater Desalting by Reverse Osmosis	Brackish Water Desalting by Reverse Osmosis
Treated Water:	40 MGD*	40 MGD	40 MGD	40 MGD
Annual Capital Cost Fully Amortized @8%, 30 years	16,032,706	*(25,184,904)*** 37,752,750	12,540,760	3,740,210
Annual Operation & Maintenance Costs for 40 million gallons per day	2,592,000	4,467,000	35,916,000	8,030,000
Total Annual Costs	18,624,706	*(29,651,904)* 42,219,750	48,456,706	11,770,210
Cost per 1,000 gallons	$1.28	*(2.03)* 2.89	3.32	.81

* MGD = 1,000,000 Gallons Per Day

** Note: Italics indicate original costs; figure underneath the italicized costs illustrates the cost based on a recent estimate of capital cost by Virginia Beach.

(SOURCES: West Piedmont Planning District Staff; Wiley & Wilson Studies for the ARWA; Water Services of America.)

INTERBASIN TRANSFER OF LAKE GASTON

WATER TO VIRGINIA BEACH

Data below is from Virginia Beach Director of Public Utilities letter supplied by State Water Control Board; U.S. Army Corps of Engineers hearing record; calculations by WPPDC staff.

Capital Costs: Annual Facility Costs

Reservoir Intake/Pump Station	$ 3,500,000
Raw Water Line (Reservoir to Windsor Outfall)	83,200,000
Raw Water Line (Windsor Outfall to Suffolk raw water mains)	8,536,080
Booster Pump Station	4,300,000
Raw Water Line, Expansion (Western Lakes to WTP)	12,180,000
Treatment Plant Expansion	2,100,000
Water Distribution Expansions	3,133,000
Contingency	11,694,908
Legal, Administration, Engineering	19,296,598
Financing (during construction)	32,546,929
Total	$180,487,515

Annual Amortization cost = $16,032,706

Annual Operation and Maintenance Costs

Estimated, based on (1978 U.S. Army Corps of Engineers Study, p.6)

Pipeline	$ 305,000
Intake/Pumping	62,000
Power	186,000
Treatment	2,039,000
Total	$2,592,000

Total Annual Costs

$18,624,706 (Annual Capital Cost: $16,032,706 + Annual O & M: $2,592,000)
Average charge per 1,000 gallons = $1.28.

Calculation of Amortization: @8.0%, 30 years

$$\$180,487,515 \times 30 \text{ years} \times \frac{\$88.83}{1{,}000 \text{ of loan amount}} = \$480,931,179$$

or $480,981,179 ÷ 30 years = $16,032,706 per year payment, assuming no money is paid up front.

INTERBASIN TRANSFER OF APPOMATTOX RIVER

WATER TO VIRGINIA BEACH

(Data and references below are from a Wiley & Wilson Study for the Appomattox River Water Authority; financing cost estimates made by West Piedmont Planning District Commission Staff.)

Capital Costs: Annual Facility Cost

Reservoir	$90,534,000	(p.32)
Transmission	$153,091,000	(p.33)
Treatment	$39,893,000	(p.35) (designed for 60 MGD)
Total	$283,518,000	

a) Annual Amortization Costs = $25,184,904 (based on original cost)

b) Annual Amortization Costs = $37,752,750 (with cost escalated to $425 million, Source: Virginia Beach Director of Public Utilities)

Annual Operation and Maintenance Costs

Reservoir	$50,000	(p.32)
Transmission	$2,128,000	(p.32) (operating @ 40 MGD)
Treatment	$2,289,000	(p. 32) (operating @ 40 MGD) --designed for 60 MGD
Total	$4,467,000	

Total Annual Costs

a) $29,651,904 (capital cost of $283.5 million plus O & M)
Average charge per 1,000 gallons = $2.03

b) $42,219,750 (@ escalated capital costs to $425 million plus O & M)
Average charge per 1,000 gallons = $2.89

Calculation of Amortization: @8.0%, 30 Years

a) $283,518,000 x 30 years x $\frac{\$88.83}{\$1,000 \text{ of loan amount}}$ = $755,547,118

or $775,547,118 ÷ 30 years = $25,184,904 per year payment, assuming no money is paid up front.

b) $425,000,000 x 30 years x $\frac{\$88.83}{\$1,000 \text{ of loan amount}}$ = $1,132,582,500

or $1,132,582,500 ÷ 30 years = $37,752,750 per year payment, assuming no money is paid up front.

SEAWATER DESALTING BY REVERSE OSMOSIS

PLANT SIZE: 40 MGD

Capital Costs - Plant, Site Development, Interest, etc.

@ $3.00/gallon per day--Capital facility unit cost to desalt seawater

$$\frac{\text{Plant size:}}{40{,}000{,}000 \text{ gals. per day}} \times \frac{\text{Unit cost:}}{\$3.00/\text{gal.}} \times \frac{\text{Load factor:}}{\frac{1}{.85}} = \$141{,}176{,}470$$

Total capital cost = $141,176,470
Annual Amortization cost = $12,540,706

Operating and Maintenance Costs

@ $2.46/1000 gal. per day--O&M unit cost

$$\frac{\text{Plant size:}}{40{,}000{,}000 \text{ gals. per day}} \times \frac{\text{Unit cost:}}{\$2.46/1000 \text{ gal.}} \times \frac{\text{Load factor:}}{1.0} \times 365 \text{ days} =$$

Annual O & M cost = $35,916,000

Total Annual Cost

$48,456,706 (total of above amounts: $12,540,706 & $35,916,000)

Average monthly charge per 1000 gal. = $3.32

$$\frac{\$48{,}456{,}706}{12 \text{ mo.}} \div \left(40{,}000{,}000 \times 365 \text{ days} \times \frac{1}{1000 \text{ gal.}} \times \frac{1}{12 \text{ mo.}}\right) = \$3.32$$

Calculation of Amortization

$$\$141{,}176{,}470 \times 30 \text{ years} \times \frac{\$88.83}{\$1000 \text{ of loan amt.}} = \$376{,}221{,}175$$

Annual amortization:

$376,221,175 ÷ 30 years = $12,540,706 per year

Source: Water Services of America, Inc.; West Piedmont Planning District Commission Staff

BRACKISH WATER DESALTING BY REVERSE OSMOSIS

PLANT SIZE: 40 MGD

Capital Costs - Plant, Site Development, Interest, etc.

@ $1.00/gallon per day--Capital facility unit cost to desalt brackish water

Plant size: 40,000,000 gallons per day x Unit cost: $1.00/gal. x Load factor: $\frac{1}{.95}$ = $42,105,263

Total capital cost = $42,105,263
Annual Amortization Cost = $3,740,210

Operating and Maintenance Costs

@ $.55/1000 gal. per day--O & M unit cost

Plant size: 40,000,000 gals.per day x Unit cost: $.55/1000 gal. x Load factor: 1.0 x 365 days = $8,030,000

Annual O & M cost = $8,030,000

Total Annual Cost

$11,770,210 (total of above amounts: $3,740,210 & $8,030,000)

Average monthly charge per 1000 gal. = $.81

$\frac{\$11,770,210}{12 \text{ mo.}} \div \left(40,000,000 \text{ gal.} \times 365 \text{ days} \times \frac{1}{1000 \text{ gal.}} \times \frac{1}{12 \text{ mo.}} \right) = \$.81$

Calculation of Amortization

$42,105,263 x 30 years x $\frac{\$88.83}{\$1000 \text{ of loan amt.}}$ = $112,206,315

Annual Amortization:
$112,206,315 ÷ 30 years = $3,740,210 per year

Source: Water Services of America,Inc. ; West Piedmont Planning District Commission staff

Observations on RO Alternatives

The two RO alternatives do not include costs for intakes, pumping stations, and lengthy transmission pipeline. Design and engineering studies based on specific sites would have to be made to determine if the project costs presented herein would be increased significantly. It is possible that an RO plant could be located to require minimal transmission facilities.

RO alternatives require significant energy (electric) inputs due to the pump pressures required to process raw water. Seawater RO processing requires substantially higher pressure than brackish water RO processing and is reflected in the large difference in O&M costs for the two RO alternatives.

The level of energy cost included in O&M costs is a major factor in determining the competitiveness of RO alternatives. This cost could be reduced substantially for both seawater and brackish water alternatives if urban solid wastes were utilized to produce energy for use in pumping the process water. Secondly, additional cost reduction can be made by recovering the commercially valuable constituents found in brines that are normally discarded from the plant processing. Seawater RO by-products can be especially valuable since industrially important salts could be retained and sold. Using solid wastes as an energy source combined with materials recovery could effect the greatest operating cost reduction in RO plants that employ seawater.

RO alternatives could employ combinations of raw water from: 1) brackish water from wells and/or surface water bodies; b) seawater; c) effluent water from secondary sewage treatment plants; and d) freshwater from wells or surface water bodies--to produce a potable water supply. A multi-faceted system such as this has not been proposed to our knowledge. However, though studies have not been made, it is possible that such a system of sources could give a lower water cost per 1,000 gallons than any presented by interbasin alternatives.

An RO alternative employing brackish groundwater and subsequent injection of sewage treatment plant effluent back into the brackish acquifer could result, over time, in a decrease in salinity (brackishness) of the acquifer; and thus effectively reverse the progress of salt water intrusion into the coastal region of Tidwater that is thought to be occurring. There is no evidence that this process would work; however, as a concept it should be investigated. Volume of brackish groundwater available to meet demands is an obvious necessity for this concept to be workable.

While the U.S. Army Corps of Engineers eliminated desalination as an alternative (1976) for a long-term supply of water to Tidewater, not enough information has been supplied as to what technology was considered. Advances and improvements in reverse osmosis technology have been made in recent years; reverse osmosis has been selected over the older methods of desalination, distillation, and electrodialysis. Virginia Beach apparently abandoned an RO project when federal funding was not available.

Observations on Interbasin Alternatives

The costs presented herein are from feasibility studies; thus, final design and engineering studies may indicate higher costs than now anticipated. Secondly, project costs are usually at the levels current for the period of study, not escalated forward to account for inflation over the 5- to 9-year period needed between decision to proceed and start-up of the operations.

Consultant and U.S. Army Corps of Engineers studies received included only alternatives involving water transfers that employ basically large-scale civil engineering works. There were no desalting alternatives for cost comparison. A U.S. Army Corps of Engineers hearing record in June 1978 noted that a desalting alternative was considered in studies during 1976. The study group apparently dropped it and finally recommended a Lake Gaston project out of the twelve alternatives considered at that time. A letter from the Virginia Beach City Manager to the State Water Control Board in September 1981 mentions a 10 mgd desalting project at a cost of $25.4 million with a water cost of $1.92 per 1,000 gallons. The city was trying to get Federal funds for the project--this prospect was dimmed by cuts in Federal spending. The letter closed noting that the project for desalting brackish groundwater was placed on hold to explore other sources of supply--such as the Appomattox River and Lake Gaston projects proposed in earlier U.S. Army Corps of Engineers studies.

Information received regarding raw water sources often rate the various alternative sources as to water quality: poor, good, excellent. However, no investigations indicated whether or not the waters contained high levels of carcinogenic organic compounds. Particularly for Roanoke River waters (Lake Gaston project), some investigation should be made as to potential hazards for long-term exposure of Tidewater water users. Much of the water runoff entering the Roanoke River Basin flows through row crop areas that employ insecticides, herbicides, nematocides, plant hormones, and other agribusiness chemicals. The question should be answered as to whether a hazard exists; and, secondly, if a hazard exists, what costs will be added to the conventional treatment systems used with the interbasin alternatives. Brackish water or seawater desalting alternatives should not be faced with this problem since they would not use the sources named.

General Observations

The RO seawater desalting alternative's water cost would be double the water cost from a Lake Gaston interbasin-type alternative--if one assumes that both costs can be proven accurate. Selection of the RO seawater alternative would assure an adequate water supply. In addition, it would not pose a threat of costing potential or future users in other areas their water supply--and, hence, their potential for growth and development.

If brackish water or brackish water in combination with effluent water, well water and surface water, could be found in adequate amounts in the Tidewater-Virginia Beach vicinity, the cost comparisons--if proven accurate--

would indicate that a RO brackish water desalting project could produce water at a cost far cheaper than any other alternative, including interbasin transfer alternatives. This would cost the Tidewater users less and not pose the threat of future hardship or delimited economic development alternatives for the neighboring communities now being asked to be donors of water.

If technologies such as raw water desalting and recycling/reuse were combined with conservation measures, it is possible that the Tidewater areas could solve their water supply problems without resorting to efforts to make interbasin transfers. A consultant to the WPPD staff noted that areas should: first, take stringent conservation measures--including upward adjustment in water rates; secondly, develop local brackish (or freshwater) water sources with RO projects; and, thirdly, develop pipelines or seawater RO projects. This seems the most logical, least costly route.

STATEMENT OF ALLAN A. HOFFMAN, M.D.

Mr. Chairman, my name is Allan A. Hoffman, a physician in private practice in Danville, Virginia and a director of the Roanoke River Basin Association and a member of the Roanoke River Basin Committee of the city of Danville. My personal interest in the Roanoke watershed extends over the recent 12½ years that I was privileged to serve our Commonwealth as a member of our commission of game and inland fisheries and during the majority of that time as a member of our State's council on the environment. I appear in support of H.R. 4317. The environmental assessment as performed by the Corps of Engineers far too hastily and superficially addresses the effects of the project on the fragile and valuable fisheries of the lower Roanoke River and on recreational usage of Kerr Reservior and Lake Gaston, which are among the most popular tourist facilities in all of Virginia and North Carolina.

In addition, the assessment does not deal at all with three very major issues which should receive careful attention before final approval. The first is the probability of establishing a precedent by which communities in other watersheds will feel justified in further withdrawals for the Roanoke basin. It is likely communities in the Greensboro, North Carolina area will, following a major abridgement of riparian doctrine, feel free to appropriate water from the upper Roanoke watershed. Down stream from that lies one of the most intensive industrial complexes in Virginia and North Carolina. In Danville and southern Pittsylvania alone there are perhaps 12,000 jobs and nearly two billion dollars worth of invested capital involved in manufacturing facilities that are dependent on the flow of the Dan River for processes and/or hydroelectric facilities. The flow of the Dan at a 10 year low flow is just barely adequate to meet the needs of these industries. Significant withdrawals upstream may well compromise this portion of the industrial base of Virginia which includes the largest truck and airplane tire factory in world and the largest single unit textile mill in the world.

Secondly, the Hampton Roads area suffers presently from poor water quality due to inadequate sewage treatment facilities. An addition of 60 million gallons a day under present circumstances will only aggravate this unfortunate situation and are in violation of the spirit of the Clean Water Acts and the stated policies of both our Federal and State governments.

Thirdly, it is a matter of national policy and that of the States of Virginia, Maryland and Pennsylvania that water quality within the Chesapeake Bay be improved so as to realize the fullest recreational and fisheries potential of that unique body of water. At present nearly one third of the nutrients in the Chesapeake Bay are from the Hampton Roads area with over 135 million gallons of sewage per day. It appears that the additional increment of 60 million gallons a day of sewage will only aggravate this problem and act in distinct contradiction to stated national policies and those of at least three States.

I believe, therefore, that the environmental assessment performed by the Army Corps of Engineers is superficial, inadequate and far too limited in scope and that a full environmental impact statement should be required. It would also be appropriate for this committee to direct that the problems I have mentioned should be addressed. Perhaps the alternative of indirect reuse that has been suggested by the Roanoke River Basin Association should be explored. This would involve upgrading of sewage treatment in the Hampton Roads area with routing of more purified efflu-

ent into the tributaries of existing reservoirs where the effluent may be naturally purified. We have used this system in Virginia's Occoquan Reservoir serving 650,000 northern Virginians with great efficiency and complete safety. Additionally this would result in a savings of nearly 100 million dollars over the proposed project and avoid the perilous risk of placing our States in skirmishes over water rights in perpetuity.

Thank you very much for the privilege of appearing.

Mr. ROE. Please proceed.

TESTIMONY OF A PANEL CONSISTING OF W. EWELL BARR, CITY ATTORNEY, DANVILLE, VA.; SEWARD ANDERSON, CITY COUNCILMAN, DANVILLE, VA.; MARK HENNE, WEST PIEDMONT PLANNING DISTRICT; AND DR. ALLAN A HOFFMAN, MEMBER OF THE BOARD, ROANOKE RIVER BASIN ASSOCIATION

Mr. BARR. Mr. Chairman, thank you very much. My name is Ewell Barr, and I am the city attorney for the city of Danville, Va.

The committee has very understandably asked for brevity, and the avoidance of repetition.

On behalf of the city of Danville today, we are in a position to add, I think, a unique perspective to the issue before this committee.

With the indulgence of this committee, I would like to go into that, to perhaps a little greater extent than otherwise.

Mr. ROE. If you will bear with me, I have to go vote, but I will come back immediately.

[Short recess.]

Mr. ROE. The hearing will reconvene.

We were about to hear from Mr. Barr.

Mr. BARR. Thank you, Mr. Chairman.

Again I repeat I am here as a representative of the city of Danville, and we begin particularly in the context of today's hearing to present what may be a unique vantage point.

The city has a population of approximately 46,000 inhabitants and it is located on the Dan River, the southern boundaries of Virginia approximately 200 miles inland from Virginia Beach, and I would emphasize approximately 85 miles west of Lake Gaston, and that means we are upstream from the focal point of the proposed pipeline.

Mr. ROE. Are you also above Kerr Lake?

Mr. BARR. Yes, sir. I would guess perhaps 60 miles west of Kerr Lake itself.

About 45 miles to the southwest of Danville lies the city of Greensboro, N.C., which has a population of approximately 160,000, and Greensboro has already, and prior to the issuance of the environmental assessment by the corps, publicly announced and acknowledged that it desires and intends to tap the Dan River upstream from Danville as a source for additional water for its future needs and, as it explains it, it intends to pump that water just over the hill into the Cape Fear River basin. The Dan River is a tributary to the Roanoke River and part of the Roanoke River basin.

Greensboro has observed the Virginia pipeline with great interest and gives it as a precedent for its desired withdrawal and transfer of water from the Dan River. Therefore, the city of Danville finds itself already from the mere proposals alone between compet-

ing demands for water from the Roanoke River basin and the Virginia pipeline proposal is the event which has initiated apparently Greensboro's public expression of interest in pursuing a similar solution. Therefore, when the Corps of Engineers has expressly found that the proposed pipeline project would not constitute a precedent and would not necessarily stimulate future similar proposals, we submit that it has ignored existing fact.

One of the evaluation factors which the corps is required to consider in determining the significance of impact is, and I quote, and it is acknowledged by the corps:

> Whether the action is related to other actions with individually significant but cumulatively significant impacts, significance exists if it is reasonable to anticipate a cumulative impact on the environment. Significance cannot be avoided by terming the action temporary or by breaking it down into small component parts.

We submit that that is precisely what the Corps of Engineers has done in this instance. It has looked only at the immediate environs of the lake and the location of the pipeline and has ignored the related actions. It has, absent that evaluation, as follows:

> This action is not related to any other known actions, significant or otherwise. This permit decision is neither expected to induce or preclude any similar requests in the future. And future applications will be reviewed for both individual and cumulative impacts.

It is the contention of the city of Danville that the corps has overlooked or ignored the fact that there are related actions, that they are inspired by the Virginia Beach proposal, and that to review in the future other applications such as Greensboro's is unhappily after the horse is out of the barn, and we submit that the environmental impact statement is designed and, by law, required to address justice and consideration. It is for this reason that the city appears before the committee today in support of the adoption of the House of Representatives bill 4317.

We thank the committee very much for its interest, for its patience in considering the presentations being made today. Thank you.

Mr. ROE. Thank you.

Mr. Anderson.

Mr. ANDERSON. Mr. Chairman, committee members, I am Seward Anderson, council member of the city of Danville, Va.

I think you will all agree with me there is very little left to be said, but neither my ego nor my integrity will allow me to read my statement.

Mr. ROE. You must have won by a big majority last time.

Mr. ANDERSON. I would say, however, that the Dan River is Danville's greatest natural resource. We feel if an interbasin transfer policy as set comes about, it will foster artificial growth and will be, in effect, an interbasin transfer of not only water but industry, commerce, and economic well-being.

Gentlemen, I am neither a Senator, nor a Congressman, nor a Governor, nor even an old country lawyer. I am only a city councilman from a small city, but I comprehend national policy, and I realize that Federal law exists for the sole purpose of protecting those persons at the bottom of the ladder.

The city of Danville supports H.R. 4317, and we hope you will as well.

Thank you.

Mr. ROE. Mr. Henne.

Mr. HENNE. I am Mark R. Henne, executive director of the West Piedmont Planning District Commission, a regional planning agency located in Martinsville, Va. I have been authorized and encouraged by my commission, comprised mostly of local elected officials, to speak in support of the House bill 4317 to require an environmental impact statement on the proposed water pipeline from Lake Gaston to Virginia Beach.

The planning district's concern is that alternatives to the proposed pipeline project have not yet been fully addressed by the Army Corps of Engineers in its environmental assessment. Second, the current pipeline proposal represents a major precedent setting, interbasin transfer of water, which raises legitimate environmental concerns that can only be properly addressed through an environmental impact statement, as well as a case study of the Western United States experiences with interbasin transfers of water.

We believe that an environmental impact statement is the proper accepted standard of procedure and documentation of providing thorough and up-to-date consideration of water producing alternatives and their environmental impacts for Virginia Beach and its neighboring localities that are parties to the proposed pipeline project. We believe that the environmental impact statement should address the following issues and questions that have not been fully addressed in the environmental assessment.

The Corps of Engineers' environmental assessment ruled out the alternative of using a reverse osmosis desalination plant in water production schemes because of: (1) The sodium levels in treated water; (2) the high energy consumption and its high cost; (3) the difficulty of converting salty raw water sources into freshwater and the resulting byproducts that must be disposed of that may affect the environment; and (4) the drawdown of brackish groundwater, as the raw water source could dry up some existing wells and raise sodium and chloride levels in other wells.

We are aware that Virginia Beach considered desalting plants for water production in the 1970's and that the corps' environmental assessment addresses the desalting alternative as already noted, but does not, however, cite a reference documenting the lack of feasibility of a desalination alternative.

We feel that an environmental impact statement should be used to answer the following unanswered questions:

Have the Corps of Engineers and Virginia Beach recently contracted firms in the private sector that are now building reverse osmosis plants throughout the world to obtain current costs of equipment, maintenance, and particularly energy requirements? It is a fact that the state-of-the-art desalination has in the last several years been able to reduce costs significantly; thus, making this alternative very competitive with conventional alternatives and, at the same time, alleviating the magnitude of environmental concerns connected with conventional solutions such as the pipeline proposal.

Have innovations in R-O desalination technology improved recently so that the alleged sodium problem has been greatly reduced or eliminated? This should be investigated.

Have the efficiencies of water conversions using the reverse osmosis desalination process improved recently so that money that is saved can then be put to use in disposing of the process byproducts in both a safe and economical manner? And, further, could not much of the desalting process byproduct be returned to the ocean from whence it originated?

In regard to groundwater drawdown, has there been a truly comprehensive hydrogeologic study of deep and shallow acquifers in the Virginia Beach-Tidewater area so that we really know how much groundwater is available? And, further, has Virginia Beach studied fully the possibility of combining groundwater, brackish groundwater, seawater, and surface water for use as raw water supplies in a desalination facility?

In addition to the above questions concerning the corps' summary rejection of a desalination alternative to their pipeline proposal and our inferences that further study of this alternative is an appropriate matter for inclusion in an environmental impact statement, we pose the following questions on the pipeline proposal that indicates that more thorough consideration of the pipeline and its environmental impacts are justified:

With the degree of opposition to the pipeline proposal and all the concerns voiced that were noted in the environmental assessment, but dismissed by the Corps of Engineers, how can an environmental impact statement not be required on such a project, considering its magnitude and a cost to taxpayers and users of $175 to $185 million?

While the Corps of Engineers rightly relegates water allocation matters to the State of Virginia and its sovereignty in water matters, should not an environmental impact statement be used to address the water allocation issue and the status of interbasin transfers in Virginia?

The State of Virginia Water Control Board recently initiated a statewide comprehensive water resource analysis to determine water needs and its availability to the year 2010. It seems that an environmental impact statement should consider this fact with regard to evaluating other feasible alternatives in lieu of a pipeline at this time.

Finally, has a comprehensive water quality analysis been made of the existing water conditions in the lake system to be used as the raw water source for the pipeline proposal? Will the water treatment currently planned for the raw lake water be able to effectively eliminate herbicides and pesticides that could be in the water and thus meet EPA safe drinking water standards? How much additional cost will be added to the pipeline project to meet the water quality standards?

Our request to the subcommittee is that it support House bill 4317 to require an environmental impact statement on the Virginia Beach pipeline and that an agency that is impartial, such as the EPA, perform the environmental impact statement work.

Thank you very much for your time and consideration of my comments.

I appreciate your allowing me to come before you today.

Mr. ROE. Dr. Hoffman.

Dr. HOFFMAN. I have some prepared text which I put in, Mr. Chairman, and which I will depart from because it is really redundant.

We in the Upper Dan watershed feel particularly vulnerable. Just to give you an idea of the stakes involved, if sufficient water is appropriated from above us, which would be 10 or 20 million gallons of water a day, we would place at risk the largest textile mill in the world and the largest truck and airplane factory encompassing about 11,000 jobs and about $2 billion worth of invested capital, so the stakes are not quite as small as a whole small series of rural communities that have no growth or vitality. We are talking about a substantial portion of the industrial base of Virginia.

I think also I might just add to Mr. McSweeney's comments the indirect proposal not explored by the corps that the Roanoke River basin advanced is already used in Virginia with the blessing of our State health department, and it serves 650,000 people through our Occoquan Reservoir. I think the majority of water in Northern Virginia comes from that source and at times during drought, 90 percent of the flow of the Occoquan Reservoir is from the advanced treatment upstream which has worked well, has never presented any kind of hazard in terms of health or insufficient volume.

The three issues I would like to touch on—and I am sorry to say I disagree with our two Virginia Senators. I do not believe that the matters which have been argued about are technical matters. They are policy matters—the corps deciding whether to do an EIS or an assessment.

Surely the spirit of the National Environmental Act would require evaluation of the secondary effects in complicated and difficult matters. This is contrary to national policy. I guess you might say we have been breast beating for spending tens of millions of dollars to try to do some cleaning up while spending hundreds of millions producing more pollution.

The corps is not really trying to address those issues which would be counter to commonsense in any reasonable perception of American public water policy. They have already made a policy decision in terms of ignoring riparian doctrine, except for a smaller number of exceptions, both in North Carolina and Virginia where it is the common law of the States since before they were States, and it is something that we have, despite pressure, chosen ourselves to uphold in our legislatures in the past few years. So basic policy decisions have been made by an administrative agency, and I think it is certainly the recourse of the citizens to come to the Congress and say, no, we believe that in view of the policy implications that the environmental assessment should be broadened in scope and should be done in depth as an environmental impact study. Surely that is a proper overview function of Congress, and surely more appropriate than going to the court.

Second, I agree with the chairman, having been married for several years now to the lady who designed the environmental impact statement process in Virginia, that it will be more limited in scope than is really desired by the petitioners, but I do think there is room for this committee, because of its experience and because of its education in this area, not only to say there should be an environment impact study to look at mundane things but to look at

whether this is going to result in a satisfactory environment in which human beings can live and work and play, healthfully, and have sufficient water resources which all living things need in order to maintain a civilization.

There may be some additional opportunity here to say to the sponsoring agency not only do we want an environmental impact study but we need, with the cooperation of both States, a notion of what other alternatives are available rather than plunging us into appropriation doctrine and a water war between the people in the Roanoke basin and the rest of the people in Virginia and North Carolina.

People say this is a political thing. It is not even Virginia against North Carolina. No, it is 1.3 million people living in one basin that has fairly copious water resources, though seasonally excessive but not year round.

What they are saying to you is they want to be able to tell their children that this will be a place for them to live, that there is going to be an opportunity to have enough water for industry and agriculture. They do not want to have to say to their children that because a big city a long way away did not like 20 or 30 other alternatives that they lost sufficient water so that they will not be able to work, live, grow up and have children where their mothers and fathers lived.

Mr. ROE. Now the Solomon aspect.

You know I served in Congress 15 years and we have been through some tough ones, everything from coal slurry pipelines to MX missiles, the B-1, and everything that affects human beings.

I was mayor of my community and served in city government so I have had some experience in dealing with neighbors, not constituents. I have sat there many times where you are sitting and presented my views to someone else.

When I was mayor of my town—let us indulge ourselves for a few minutes.

We had a town of 16,000 people, 27 square miles, beautiful farming community, different centers and so forth, so I can understand what Mr. Barr has spoken to. But we were in the vanguard of growth. The country now has 235 million people in it and it is growing arithmetically.

We used to sit like this day in and day out up until 2 o'clock in the morning. No citizen was ever turned off as far as I am concerned. The debate was fought over at that particular time over a housing development. They bought one of the farms and were going to build the 160 some odd houses. Everybody testified, it was about 1 o'clock in the morning, and one person got up and was very abusive, unnecessarily abusive, and there was no necessity for that, and it was a question of what was the right decision to make. He lambasted the governing body to the point where he wanted his sovereignty and the whole bit and so on and so on and so on.

I am very patient with people. When he got a little too abusive, I stopped him. I said let me ask you just one fundamental question. How long have you lived in Wayne?

There was another moment of silence. He said, well, I have been here two years.

Then I let him have it in no uncertain terms. I said who are you to come before this governing body where people have lived here 50 years and you come in here and found your sanctuary and your place to breathe and raise your children, but you do not want anybody else to come in. That is No. 1.

No. 2, one speaks to the people, to citizens, to neighbors, to human beings in the city of Roanoke. One comes back and says as best I understand the issue through no fault of Virginia Beach, the guy next door is going to take the water because we have the right to hold it for ourselves and go do something else.

Now, the people of the United States, including my taxpayers from New Jersey, built that reservoir. They paid for it just as you did. You pay in other States and we do too. New Jersey is a donor State for every 2 bucks we spend, we get 40 cents back. My people tell me that all the time.

Here is a body of water that has just been built. It did not exist. People got together and said there should be some way of protecting people who are being flooded out and so on.

When I was a commissioner in New Jersey where I lived, we had enormous floods. When I say enormous, it would probably make some of the situations in Virginia pale.

We lost six people, and this was in one flood just recently. I said that we should be doing something about it.

One of the mayors got up and actually said this, Mr. Commissioner, I appreciate your feeling and I appreciate your involvement, and you get kind of emotional about this, and I realize six people lost their lives, but we have to protect our property rights.

As a human being, I was ready to throw him out the window because all he was considering was how much more roast beef he could get. That was the issue. He did not care about the six people who drowned. It was more important that he have his property rights.

Whether we like it or not, we are all in the same boat. I am not trying to philosophize or lecture.

The tragedy that I see here, we could make the determination, and I am not ruling it out, we could make the determination and say, OK, we will support that environmental impact statement.

Now, the question I would like to ask all those who testified today is if the environmental impact statement comes out because somebody did some more, whatever, and I am familiar with environmental impact statements, if they said it will not be deleterious, are we willing to say go ahead and build that line because our neighbors need it?

Here we have a reservoir that belongs to the people of the United States and it is called Kerr Lake, and we are saying it is in your area. I do not know at this sitting whether or not the State of Virginia has a complex or at least a devised master plan of water resources.

As Mr. McSweeney said, it is the water supply that will determine the direction not only here, but throughout the country.

And what about California, the vegetable basket of the Nation, if you like, having arguments with Mexico. People want to set the water off. So you will find a water crisis exists already. This is a manifestation of it.

It would seem to me that Virginia Beach needs the water supply. They are not aliens from another planet. They are brothers and sisters and mothers and fathers and kids, and they all have the same problems we have. It is true North Carolina rightfully should have a share of that water supply, and the people living around the lake should have respect for their needs.

I smile for myself. I would not have a place on a lake if the U.S. Government did not build that lake.

So the water resources are there to be utilized and the optimum resource says for your mother, your father, your brothers and sisters, aunts and uncles.

I think we should be saying to the State of Virginia and the State of North Carolina stop it. There are water resources available to you in your State and you should have equitable rights to those water resources for those States and the communities involved. That is the fair thing to do. I think that is the way we have to go.

Will the public interest be served or not served because, to be sure, an environmental impact statement—and I am not opposed to it—will solve this problem is not so. It will not be so. You have to make an environmental impact statement on the entire State of North Carolina and Virginia. This is a pretty bright committee, and we have worked on hundreds and hundreds of similar projects. I just want to leave that with you. I think you have testified, and I have been pleased to participate with you today. On the basis of your being fellow citizens, I learned something starting out this morning, and I hope everybody who had the courage and ability to sit through this afternoon has learned something about each other as to where the problem really lies.

Be assured the committee in its infinite wisdom or lack of wisdom will solve these matters and come up with some better recommendations.

Dr. HOFFMAN. I think one of the troublesome things for people who live in a watershed, whether they are Virginians or North Carolinians is that the corps is treating this matter as if it is of little consequence. They feel there should be more emphasis placed on other alternative sources that are really technically feasible and more consistent with State and national water goals. While we do not have a national water policy, we have a national water philosophy as reflected through the Clean Water Acts, which reflects this.

I think one of the things they want to get out of this business of doing more formalized and detailed studies is a much harder look at the alternatives to see if those are viable mechanisms that are helpful and effective.

Mr. ROE. What I am trying to help educate you on, there is a misconception as to what an environmental impact statement does. It is not an engineering document where they will go and say there will be 25 different alternatives and desalinization, and whatever.

An environment impact statement takes what is before it and determines how it impacts upon what you have. It does not go very far. Without a related master water resource plan of your respective States, the only environmental relationship they can look to is the issue of the Kerr Lake and the Gaston Lake.

The law that was passed, I believe, in 1955 when they built the reservoir, the impact upon flood control and so on, and so on, and

the impact on the levels—does it affect the fish? What should we do with water quality? It does not solve the fundamental problems.

Dr. HOFFMAN. One of the things that I think is troublesome, and I think you found this in the testimony, there is a feeling by the people who represent the watershed that there is a mind set on the part of Virginia Beach to run a pipeline.

Mr. ROE. Let us go back to where you and I were brought up. When I was a child, the Passaic River was so polluted it would catch on fire. If we approached things with the same mind set, this is the attitude that is held within our watershed that the solution would be to run a pipeline to Greenwood Lake or Hackensack. Actually what happened was absolutely a magnificent change in water quality within the major rivers in northern New Jersey, reused in community after community, and what we would like to stimulate not only EIS, but some direction from Congress here back to the Corps of Engineers and say let us think a little bit more perhaps in the modern sense, consistent with the spirit of the Clean Water Act and technical advances that have been made, and let us try to look at what we can do with the improvement of water quality and reuse.

I think that is a place for this committee to play a role.

Mr. Packard.

Mr. PACKARD. Thank you, Mr. Chairman. I would like to make a few remarks too, and I do not wish to take sides in the matter.

It is interesting how the chairman's experience in local government is very similar to mine. I have sat in these kinds of disputes as a mayor and city council member for years. They are not easy because, on each side, there are some very parochial and tunnel vision attitudes and approaches to an issue that does not have a simple solution. This is one of those where there is not a simple solution that will be beneficial to both sides of the question. It is a question of how to distribute the water on an equitable basis that will not deteriorate or work against somebody else.

Let me clarify one or two points. This may sound like I am coming to the defense of the Corps of Engineers, and it is not intended to do that, but to state what my experience with the corps has been. It has been rather considerable in these kinds of decisions.

First of all, the corps has a wealth of ongoing research and information that may not be specific to the Virginia-North Carolina dispute, but it is certainly updated information and research that applies to almost every similar dispute. They are not isolated to this problem only, and a research program on this project would uncover unknown and unusual and different circumstances. They have ongoing updated information, and that ongoing updated information clearly indicates desalinization as an alternative, for example, which is not a feasible alternative at this particular time. It is simply not economically feasible. It is not competitive with other methods of solving water disputes and water problems and it cannot be produced in quantities that are required here to the point that it would solve the problem.

Obviously it is easy to look to these as possible alternatives, but the fact is that is not an alternative.

California has looked at desalinization for 40 years as a hope for solving their problems. If there was any way to produce potable water out of the ocean or out of brackish water, we would have found the answer and we would be doing it. I would have to state that water costs in my area of southern California are a lot different than water costs that we are talking about here. There is just absolutely no comparison. I do not believe there is any comparison across this country where water is of higher cost than in my area.

With those high costs, and we are talking about farmers paying something like $275, $280 an acre-foot right now, farmers. That is not industry and that is not for culinary purposes in the community. That is the farm and agriculture at a preferred rate. If there was any way we could produce out of ocean water economically something that would bring us water, we would have found it. We have studied it carefully and the corps has studied it, and they can apply that type of study to this type of situation.

To ask them to go through long delayed and difficult studies for this particular problem on desalinization would probably be a redundant exercise on the research they have already done.

On the subject of reclamation, when I was mayor, we insisted on building a reclamation plant, and we did build one at great cost. It is not in function nor will it be in function for perhaps 10 more years simply because the cost of operating was never put into the function. We have a brandnew plant. I think it was a good idea to build it. It was in vogue in southern California. It was another possible alternative. We moved in that direction, but we found we could get water cheaper than the way we were doing it, and that was not building a plant but simply operating it because it is economically not feasible.

The corps is well aware of all of these other functions, and they have been through them dozens of times in dozens of parts of this country.

In defense of the corps, there may be other options, but I do not believe they are unaware of those options.

If I heard correctly the testimony this morning, this matter has been reviewed and studied for 15 years. It has not been an easy 15 years because I have been through 30 years or so in my area. There may be other options, but it is perceived this is one of the most feasible operations according to the corps.

The question is not favorable distribution of water but the question of whether there needs to be an environmental impact statement. I wanted to ask, but I have refrained from doing so, what would be the purpose of that statement? Would it produce additional information that the corps has not uncovered in their research and review? That would be highly unlikely, but it is possible.

The purpose of an environmental impact statement has a different function, however, to certain people, and that is that it may uncover loopholes, debate points and debate different points of differences. We already have those points of differences, and it could very well be in the eyes of those who are proposing the project and those opposing the project and, of course, the corps which is trying to take a neutral position, I have to assume.

It could be an instrument of simply politicizing further the processing and creating further dispute, and there is certainly enough dispute.

It is a Federal project that came out of the hearing also. It is a Federal project, and I have to assume, or at least the implication was it was built almost entirely with Federal funds, with apparently very little input of local funds, property under the reservoirs and whatnot, but for the most part I have to assume it was a federally funded project. If it was a federally funded project, then I think the overall feeling of the Feds putting that into North Carolina and Virginia was not simply to benefit those people and the property that surrounds the project. I have to assume those Federal dollars coming from all of the citizens of North Carolina and Virginia, as well as the citizens of the rest of the country, should have equal opportunity to that investment, to that Federal participation.

The question really that I am trying to debate in my mind is do you want this committee, and when I say you, I mean the citizens of North Carolina, the citizens of Virginia, do you want the Federal Government to divide the baby for you? Do you want this committee to recommend to the departments of the Government how to divide the baby?

Well, I am not sure you would want that. If I were in your counties, I would not want the Federal Government to divide my baby and determine what allocation of water and what allocation I get from the project and what somebody else gets. If we did that, maybe the dispute would be in a different way and it would be a disputed issue and end up in the courts anyway.

You have really dumped on this committee, I think, an unfair proposal.

In my judgment, it really should not fall within the purview of the Federal Government to distribute the water equitably between the two States. That needs to be done either within the two States through the negotiation process or ultimately, like California has had to do, and it has been a painful process of doing it in the courts, but I do not believe it ought to be the Federal Government that becomes the judge of how to divide the baby.

I would hope there may be other alternatives, and I hope one of the alternatives would be to deal with it between the States and not turn it over to some other governmental agency.

Without really trying to take sides, that expresses some deep concerns I have on this whole process. It has been a very interesting hearing to say the least, and I do not see any easy simple solutions.

Mr. ROE. Can you imagine how it works—437 men and women in the House and 100 in the Senate, and they have to wrestle with problems like this.

Mr. PACKARD. This would set a precedent in my Government and this committee to deal with local and State concerns, and we would be spending almost our full time not dealing with how to solve major water and sewage and other water related issues for this country, but we would be settling and opening the door to settle local disputes that I think would be just totally unnecessary and uncalled for for Federal intrusion into the local disputes. That does

not mitigate nor does it lessen the size of this dispute. It certainly is a very important dispute and I sympathize with you.

Mr. ROE. Nor does it mean the dispute is going to go away. I think what the gentleman from California said has a lot of merit. I guess we are philosophizing now. We will deal with it. It is our responsibility.

As we return to North Carolina and Virginia, I would hope we could get our State officials saying we have to get down to water policy and we have to work together because we have joint interests.

We want to thank you for your patience and indulgence, and I appreciate that you came from your two States to be with us, and we will do our best to be of help.

If there is nothing further, the hearing is adjourned.

[Whereupon, at 4:30 p.m., the subcommittee adjourned.]

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